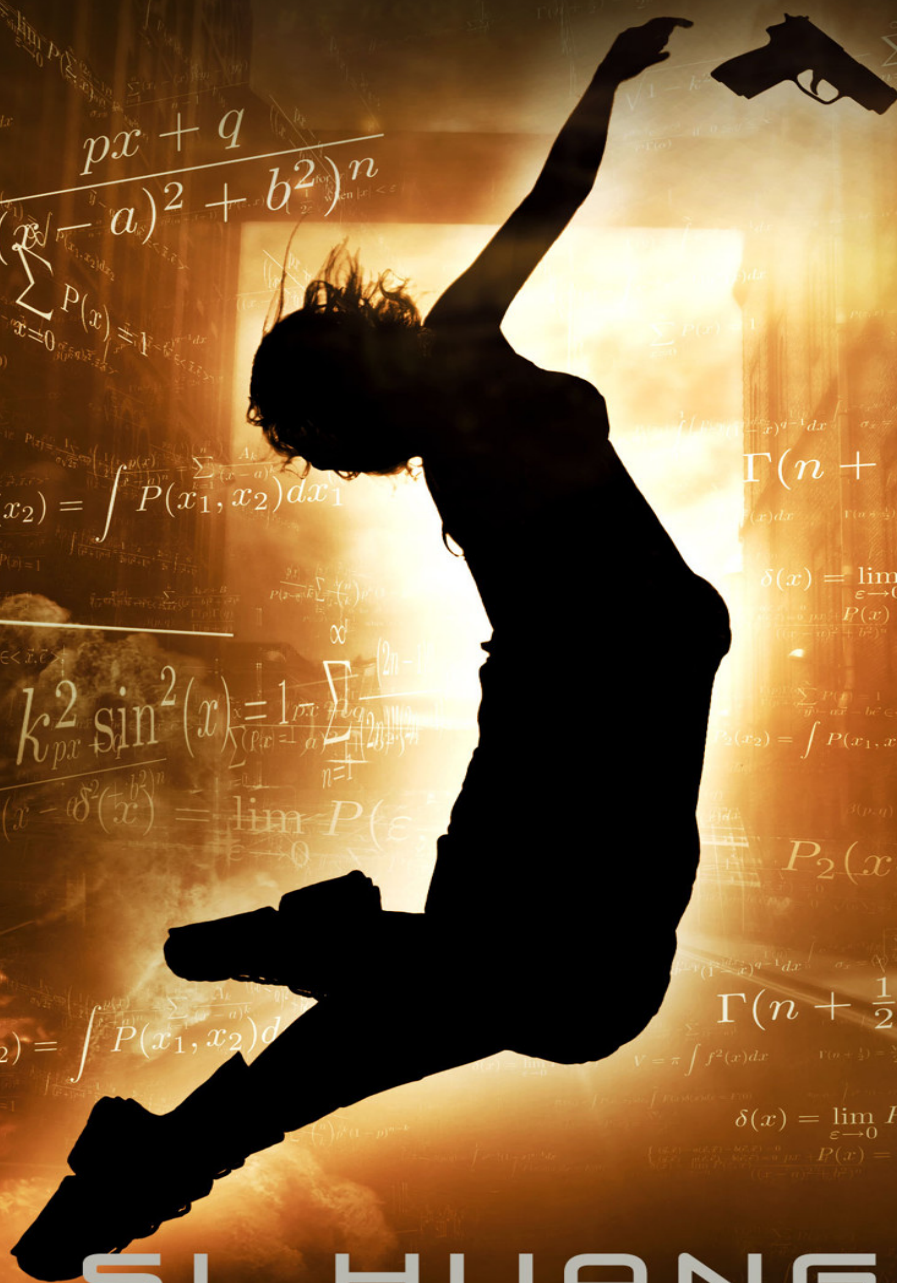


RUSSELL'S ATTIC BOOK THREE

ROOT OF UNITY



SL HUANG

ROOT OF UNITY

by SL Huang

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CHAPTER 1

THE LITTLE charge blew the safe open with a satisfying pop. The only thing inside was the flash drive I'd come for; I tucked it into my inside jacket pocket, thinking in an idiotically conceited fashion that this job had been a piece of cake.

Then I turned around and found myself facing three assault rifles.

Well, shit.

"We take a dim view of thieves in this house," said the one man not holding an M16. He flicked open a silver lighter and lit a cigarette, playing the casually evil villain cliché to a T, down to his expensive suit and cavalier posturing. Probably one of the Grigoryan brothers themselves.

"That's funny," I said, "considering that you stole this. I'm just stealing it back."

"Very high and mighty," said the Grigoryan man. He made a condescending *tsk-tsk* sound with his tongue. "Strange attitude for someone I hear will take any job for the right price."

He knew who I was, then. I shrugged. "Never said I didn't." My eyes flicked over his goons. Their gun barrels were trained on me steadily, their eyes unwavering. Well-trained—or perhaps they had been forewarned. Dammit. I was good, but I wasn't faster than a bullet.

The boss villain shook a finger at me, smiling as if I were a puzzle. "Oh, you! You intrigue me. Cas Russell, am I correct? I hear you are a little lady with superpowers. At least, that is what they tell me, eh?" He

spread his arms expansively. “Perhaps you could demonstrate them for us.”

“Superpower,” I corrected. “Just one.”

“And what is that?” His smile was indulgent.

“I can do math,” I said. “Really, really fast.”

His smile flickered, like someone trying to figure out the punchline to a joke. One of the goons blinked, his gun barrel wavering for a precious split second.

I was ready. Lines and angles and pivot points whirled around me like a fourth dimension, a sixth sense. Trig functions and force calculations cascaded through my brain faster than thought. Today’s problem was relatively simple: did the number of goons divided by the rate at which I could bash in goon heads equal less than the time it would take for one of the goons to shoot me?

It did, assuming the men only had normal human reaction time. I’m very good at bashing in goon heads.

If there was any possibility one of them had some sort of unexpected ability, like me, I didn’t give much weight to it. Mathematical expectation: the probability any of the goons was supernaturally fast, the probability one of them could get me with a nontrivial gunshot wound...

More than worth the risk.

Before Goon #3 was halfway done blinking, I pivoted toward him, spinning to leverage one boot off the wall at the exact angle calculated to give me the force I needed. I slammed into him from the side, my leg shooting out to connect with his face with a sickening crunch as I wrenched the M16 away. Unfortunately, the momentum of that move carried the assault rifle toward Goons #1 and #2 stock first, with no time to spin it and line up a shot, but that was okay. While Goon #2 was still turning to get me back in his sights, I continued my M16’s arc to slam into his weapon and followed through with my body, diving into a roll. Goon #1 got off a burst of automatic gunfire that sprayed over my head. I rolled out onto my back and pulled the trigger.

This M16 had been set on full auto, too. The weapon stuttered in my hands and Goon #1 jerked like a marionette with a bad puppet master before falling inelegantly back through a glass bookcase.

I rolled up to my feet, my borrowed M16 pointed at the Grigoryan brother. Goon #2 had managed to collect his battered weapon and had it retrained on me, but I ignored him.

“Impressive,” said the Grigoryan, his voice shaking a little. Damn well better be. Three goons neutralized in about two and a half seconds. I was *good*. “But now we have a standoff.”

“Nah, I jammed up his weapon when I hit it,” I said, jerking my head toward Goon #2. “Thanks for giving your men M16s, by the way. AKs are a lot sturdier.”

Grigoryan’s dark eyebrows drew together furiously and he glanced toward Goon #2, who tried to pull the trigger. A spectacular amount of nothing happened.

“Bye now,” I said to Grigoryan, and slid carefully out of the room, keeping an eye on him the whole time. He stared at me as I left, his cigarette dangling forgotten from a corner of his mouth.

It made my day. I liked impressing people.

Of course, now I had to get off the grounds. Grigoryan had probably raised every alarm in the place before he set foot in that room. I flicked the M16’s selector lever to semiauto—automatic fire was for people more concerned with looking impressive and chewing up furniture than being deadly. I didn’t need spray-and-pray; I needed precision.

The one thing M16s do pretty well is accuracy. If you’re a good shot, it’s possible to hit a target six hundred meters away. And I was better than a good shot. When it came to guns, I was a fucking computer program.

Some people—those I might be tempted to call “good people”—preferred a fair fight. Sniping a target from a long distance without any warning at all was disturbing to them. Killing at all was disturbing to them.

I wasn’t one of those people.

With every loud bark of the M16 in my hands, the projectile motion played out perfectly and another tiny target dropped in the distance, efficiently clearing my way to exit the Grigoryan estate. It was like reading a particularly artistic mathematical proof: every step as it should be, every piece following seamlessly from the last with no wasted moves.

The shouts and screams multiplied exponentially, emanating from all over the sprawling mansion. I didn't let any of the search parties get remotely close to me. Instead I played my own fucked up game of cat and mouse with them, one in which the mouse turned out to be an invisible assassin with an assault rifle who never missed.

I made it to the fence and set a ten-second charge. The explosion would bring them all running this direction, but by the time any of them made it this far, I'd be long gone. Tomorrow I'd deliver the goods and get paid, and this job would be over.

That was the part I wasn't looking forward to.



TWO DAYS later, I slumped very predictably in a bar, trying to drown myself in cheap whiskey. Also very predictably, it wasn't working.

I signaled the bartender for a fifteenth round. He frowned at me. I wasn't a large woman, and he'd never seen me before—I purposely didn't keep to a local. I could tell he was wondering if he should cut me off. It didn't help that even though I was legal, I probably could have passed for a teenager if I really tried.

"I'm not drunk," I said crossly. Yet. That was the goal.

"You drive?" he asked.

"No," I lied. Unfortunately, I was just as good at math drunk as I was sober. I'd never been in a car crash. At least not an unintentional one.

"Now give me another one."

"Hey, sweetheart," interrupted a voice by my right shoulder. "Buy you a drink?"

I frowned without looking up. People didn't hit on me in bars. First of all, I wasn't attractive. Whatever my mix of genes was, it combined to give me the approximate appearance of a small brown troll, and the way I dressed didn't help: sloppy loose clothes and combat boots with no makeup and short hair that approximated a tangled bird's nest. Second, I gave off "keep away" vibes strong enough to pin the largest man to the far wall.

Which meant the speaker was either blind drunk or someone I knew, and the vocal oscillations had already teased out to solve the mystery anyway. “Arthur,” I said, without turning. I needed more alcohol.

A tall black man came into view beside me. He was in his forties-ish, good-looking, with a square jaw that had a close-shaved beard pebbling it, and unlike me he always dressed neatly—well, as if he expected to be seen by other people when he left the house. He swung himself up onto the next stool over.

“I won’t have what she’s having,” he said to the bartender. “Give us each a shot of whatever’s two steps up from that.”

“You don’t know what I’m drinking,” I said.

“Ain’t sure I want to, knowing you.”

“Since when do you have such a gourmet palate?” I demanded.

“I ain’t. Got taste buds.”

Ouch.

The bartender delivered the shots and I downed mine, the whiskey burning all the way down my throat. Dammit, he was right. It did taste better. Not that I’d admit it.

“Tried calling,” Arthur said, spinning his empty shot glass on the bar.

“I know,” I said.

“How you been?”

“Oh, you know me.”

“Hey. Russell.” He put a hand on my shoulder and nudged me to face him from my stool. “Thought we was supposed to be keeping an eye on each other. Can’t do that if you disappear on me.”

I shrugged him off. “It’s been two years since Pithica. I’m not worried.”

“Ain’t the point. What’s going on?”

I looked him straight in the eyes. “I’m off the wagon,” I said.

He spared a glance for my fifteen shot glasses. “Were you ever on it?”

“Not that wagon.”

It took him a minute to get it. Then he said, “Oh.”

I signaled to the bartender again. “Don’t give me that look like I kicked your puppy. See, I knew you would react this way.”

“Want to talk about it?” said Arthur.

That wasn’t what I had expected him to say. “No. No, I don’t. The thing is, I realized—I don’t care. I really don’t care. I don’t feel bad about it. I don’t feel any different. And it’s so much easier.”

“Okay,” said Arthur.

““Okay?” I go back to killing people willy-nilly again and that’s all you have to say to me?”

The bartender put down our next two shots so hastily they sloshed over his wrists before he retreated into the back and out of sight.

Arthur made a shushing gesture and peered around the near-empty dive to see if I’d freaked out anyone else. “Ain’t saying I’m happy about it, but...well, I ain’t believe the ‘willy-nilly,’ first off. Thing is, Russell, you might say you don’t care, but I know for a fact you ain’t no killer. Don’t like you taking no hard line again, but I still got faith you only charging the guilty.”

“And if I’m not?”

He spun on his stool to lean back against the bar. “Well, that’s what I’m here for, ain’t it?”

I tried to maintain a belligerent facade, but I’d never been good at bluffing.

Arthur’s expression softened. “Don’t mean I ain’t going to keep trying to convince you, though. We had you, what, a year sober?”

A year, two months, three weeks, two days, seventeen hours, forty-three minutes, and seven seconds, give or take the amount of time it took someone’s brain to shut down after he bled out. “Yeah,” I said.

“You gonna stop avoiding me now?”

“Maybe.” I remembered how smooth and satisfying it had felt to take out the Grigoryans’ security army, and grabbed for one of the shots the bartender had left. I knocked it back and then stole Arthur’s, too. “How’d you find me, anyway?”

“I’m a PI, sweetheart. It’s what I do.”

I grunted. Arthur was one of the few people who could get away with calling me “sweetheart.” “Checker tracked my phone, didn’t he.”

“He was worried.”

Checker was Arthur's business partner, friend, and master of all things electronic. Technically, I supposed he was my friend, too. Once I'd stopped returning his messages a few weeks ago he'd started pestering me through text, from *DRUNKN BSG MARATHON 2NITE B THERE* to *PILAR&I R GOING 2C NEW BATMAN MOVIE U SHOULD COME* to *R U ALRITE???* *SRSLY, TXT ME BACK*, and finally, *I KNOW UR ALIVE, I CHECKED. LAST CHANCE OR IM SICcing ARTHUR ON U*. I'd ignored them all; I hadn't been in the mood for company.

Arthur cleared his throat. "So. I take it you ain't got no cases right now."

"Just finished one," I said. "This is vacation."

"You don't take vacations."

"Work's been slow," I admitted. The jobs I got paid me more cash than I knew what to do with, but the dead time in between was becoming a problem. "I think..."

"What's going on?"

"No proof, but I think the Lorenzo family might be putting in a bad word here and there. Mama Lorenzo can't break appearances by coming after me aboveboard, and she might've said we were square, but I've gotten hints she's held onto a gallon or so of resentment after last year."

"And she's good at subtle," Arthur agreed. "Shit. Well, I'm in luck then, 'cause I might have a job for you, and looks like you're available."

"Ha. I don't need your charity."

"Ain't charity. Client knows I need an assist on this. Your rate'll be met."

I squinted at him, but his face was serious. "You gonna let me work it my way?"

"Not a chance in hell. You in?"

"Why not." It wasn't like I had anything better to do.

Arthur's hand tightened on the edge of the bar. "Before you say yes. Happens I need more than just an extra gun."

"I said I'd play it your way, okay? No C-4, roger." I mock-saluted him.

"Ain't what I meant. Russell...we ain't never really talked about this, but..." He'd gone still and tense. "This case, client's a friend of mine. Real

important to me. It's about her work, and...my friend, she's a professor." He wet his lips. "Math professor."

"No." The refusal slipped out through stiff lips before I realized I had heard him, and I slid off my stool and stumbled toward the door. The room was whirling a little. I kind of hoped I was just drunker than I thought, but I could do the damn differential equation; I knew I wasn't.

"Russell, wait." I felt Arthur catch my arm as my foot missed the ground. "Hey. You okay?"

"Get off." I tried to shoulder his hand away; the ceiling slipped sideways again.

"You ain't have to take this job," Arthur said from somewhere up and to my right. "Forget it. Ain't no problem."

At least, that was what his words said. But his voice was tight and desperate, as if the list of people he thought could help his friend began and ended with me.

"Fine," I ground out. "I'll help."

The tension went out of him where he was still touching my arm, and I hated myself. "Sweetheart, I could kiss you," he said.

"Don't push your luck."

Still keeping a supporting hand on my elbow, Arthur pulled out his wallet and threw a handful of bills on the bar. "Come on, let me drive you home. I'll tell you more on the way."

"My car is here," I said.

His eyes slipped back to my seventeen shot glasses lined up in neat groups on the bar. "Ex-cop here. Humor me."

"I hate cops."

"Me too." Something dark flickered in Arthur's eyes. I'd never found out why he'd left the force, and even I, Queen of Social Disgraces, had eventually clued in I shouldn't ask about it.

"Fine," I said. The room was still whirling a little anyway.

Arthur took another glance back toward my neatly grouped glasses as we headed toward the door. "Fibonacci series?"

I looked back at the bar. "Sequence," I corrected. I hadn't realized I'd been doing it.

“Like to see the world the way you do some time,” said Arthur.

Vectors stretched out around me in a thousand variations, constantly reforming, lengthening, summing in infinite combinations like I was in the middle of some fucking chess game and couldn’t help but see twenty steps ahead in all directions, and I dearly wished I’d been able to have more alcohol. “No,” I told Arthur. “You wouldn’t.”

CHAPTER 2

PROFESSOR SONYA HALLIDAY, well-known luminary in the fields of cryptography and complexity theory, greeted us the next morning at the door of her on-campus office. With its sprawling California architecture and palm tree-lined avenues, the university was one of those places that tried so hard to be warm and cheerful that it automatically made me feel rebelliously depressed.

Professor Halliday was a tall, thin African-American woman who was probably in her mid-forties but looked older. She was dressed very precisely in a straight skirt and severe blouse, with her graying hair pulled tightly back from her face. She regarded us through rimless glasses and shook my hand formally when Arthur introduced us. “Are you a private investigator, as well?” she inquired.

“No,” I answered, biting down on the “ma’am” that wanted to pop out afterward. Professor Halliday had that kind of effect. “I do retrieval.”

“I don’t know what that means,” said Halliday, in a tone that demanded I explain.

I resisted the urge to tell her to look up “retrieval” in the dictionary. “It means people hire me to find items of value for them and bring them back safely. Usually things that have been stolen from them.” Usually. Sometimes I was the one doing the stealing. I left that part out.

“Sonya,” said Arthur, his tone much more subdued than I was used to hearing from him, “you said you needed someone who understood the more technical aspects. Cas can do that. Fill her in.”

Halliday turned to look down her nose at him, and the look was all wrong; even I could see that. Arthur had called them good friends, but Halliday was regarding him like he was a bug on a clean tablecloth. “Doubtful,” she said, turning to walk around her desk. She sat down in her office chair and started pulling up files on her computer. I tried to catch Arthur’s eye, but he was steadfastly not looking at me.

“Sonya,” he tried again instead, “I just want to help you, okay?”

She concentrated on her monitor. “I told you to leave me alone.”

“You called *me*,” he pleaded.

“In a moment of weakness. I believe I was very clear I do not want any help from you.”

“Arthur?” I said.

He made a “back off” motion at me with one hand. “You need help. You told me I wouldn’t understand, well, I brought someone who will. Just talk to us. Please.”

“What is your area of specialization?” said Halliday.

She hadn’t looked up, and it took me a second to realize she was talking to me. I wasn’t great at reading people’s tones, but it had never been more obvious someone was trying to set me up to fail.

Oh, fuck you.

I plopped down in one of the chairs across from Halliday’s desk, sprawling in an inelegant slouch. “You know. I do a little of everything.”

“I do not mean to be rude,” said Halliday, “but Arthur does not grasp the level of depth and complexity in my field—”

“Liar,” I said. “You do mean to be rude. Go on, say what you’re thinking.”

She finally turned to regard me, folding her hands on the desk in front of her. “Miss...Miss Russell,” she said, the title only slightly questioning, “I know personally everyone in the same line of research as myself. You must understand how specialized areas of higher math are. Even doctorates in the same general area would require a great deal of study to understand what—”

“I read all the papers you’ve published to date last night,” I said.

She closed her mouth.

“The Internet is a wonderful invention, isn’t it?” I said, deliberately misunderstanding her surprise. “Nice work on the new encryption algorithm using prime roots of unity to approximate randomness. That’s a clever trick.”

Halliday’s voice tightened. “An elementary understanding of—”

“For God’s sake, Sonya,” said Arthur from behind me, low and rough. “You told me you needed someone who understood your work. Let us help you.”

And just like that, Professor Halliday crumpled. Not in a dramatic way—somehow I doubted she did anything dramatically—but her head bowed and her shoulders hunched and she took off her severe rimless specs to press shaking fingers to her face.

Arthur swooped around the desk and put a supportive arm over her thin shoulders. “That’s okay. It’s okay. Just tell us what’s going on.”

Her voice came croakily through her hands. “I think I understand now. What you said about getting in over your head, how easy it was—how you didn’t see what was happening until it was too late.”

Arthur stiffened beside her.

I perked up. “Wait, *Arthur* did something wrong?” Arthur and Halliday both froze, and the room got intensely uncomfortable in a way I tended to find perversely entertaining. “Do tell; I want to hear this.”

“Don’t,” said Arthur, so quietly I almost couldn’t hear the word, his eyes fastened on nothing. He didn’t sound angry—he sounded like he was in pain.

The tension in the room suddenly got a lot less entertaining.

Shit. Way to go, Cas. I leaned forward and tried to go back to businesslike. “Professor. Arthur told me you had some work stolen. Why don’t you start there.”

Halliday glanced back up at Arthur, who squeezed her shoulders in support and nodded her on. She leaned into him almost imperceptibly. “Not—not some work. All of it.” She’d reached up and was gripping one of Arthur’s hands so tightly the tendons stood out in her wrist. “All my current research. All my notebooks, at home and here at the office—gone.”

Arthur sucked in a breath.

“Okay,” I said. “I take it the police weren’t able to help?”

“I didn’t—” She looked back up at Arthur, and then at me, hesitating.

“I trust Cas with my life,” he said, surprising me.

“I need you to mean that.”

“I promise,” said Arthur. “You can trust her.” Some sort of fuzzy tingly feeling crinkled in my chest at his quiet confidence; I tried not to let it show.

Halliday’s eyes flicked to me, to Arthur, and back. “I might be in—I’m in some trouble. Maybe—a lot of trouble. Arthur...I’m sorry. I’m so sorry.”

“It’s okay,” Arthur said again, almost too firmly. “We’re here to help you. Just tell us what happened.”

She closed her eyes for a long moment, then opened them and focused on me. “I found an efficient integer factorization algorithm.”

I stared at her, the implications crashing through my brain. “You *what?*”

“I was only thinking of the math!” She raised a hand as if to excuse or defend herself. “Truthfully, I never let myself believe I would actually solve it. Dwelling on the consequences of a pipe dream—it felt so arrogant, and now...”

“How efficient is it?” I asked. “Even if we’re talking polynomial time, if there’s a large enough constant in there—”

“It’s fast enough,” she said. “I think. The programming part isn’t my area. But it’s fast enough.”

“Shit,” I said, though I couldn’t help the word coming out half-admiring. “Wow.” And then the purpose of our meeting came thundering back. “Wait, someone *stole it from you?* Why the hell are you calling us instead of the police or the FBI or, I don’t know, *anyone?* I’m usually in favor of going outside the law, but when it comes to *wrecking the entire global economy*—”

“I know!” cried Halliday. “I know I should have. I tried talking to a friend of mine who works for the NSA—just hypothetically, as if I were considering working on a problem like this, and he told me—” She took a breath, swallowed. “The amount of oversight they wanted if I began work

on the problem, the care he told me to take if I was getting close...if they found out I—”

“Yeah,” I said. “Yeah, okay. I get it.” Arthur’s face was a study in confusion; I turned to him and tried to explain. “Pretend you built a nuclear bomb for fun and someone stole it. I don’t know if there’s a law on the books for this, but if they decided they wanted Professor Halliday to go down, they could probably find one. Hell, cryptographic algorithms used to be classified as munitions under U.S. law—a few years ago you could go to jail for sending someone three lines of Perl script. They take this shit seriously.”

“I should have gone to the authorities,” Halliday said. “It was selfish. I was—I confess I was frightened. I have a handful of friends who consult with the NSA, mathematicians, and I could have, I *should* have talked to them right away. And now...now I fear it might be too late.”

“Why do you say that?” said Arthur.

Still gripping his hand with one of hers, Halliday reached down with the other and unlocked a drawer in her desk. She drew out a blue file folder and handed it up to him. “I found this in my office the next day.”

He opened the folder, and his expression twitched, the muscles in his face tightening. He passed the folder to me.

It had one sheet of paper inside. Plain white paper, with plain black lettering printed on it:

We aren’t planning to wreak destruction. But pretend this never happened, or else.

“Huh,” I said. “I suppose it could be worse.”

“How?” said Halliday incredulously, some of her control slipping.

“Whoever stole your proof isn’t planning on destroying the world, only being selfish with it—probably getting rich. Unless they feel threatened, apparently. This gives us some time.”

“Time for what?” Halliday demanded. “Whether or not we find who stole it, whether or not we get it back—the information is out there now!”

“Stop panicking,” I said. “Or at least go somewhere else to do it after you give us the rest of the information.” I snapped the file folder closed. “We’ll keep this. Now, who else knows anything about the proof?”

“No one,” she said, steadying her voice with an obvious effort. “It was my pet project. My Fermat’s Last Theorem. I was embarrassed even to tell anyone else I was working on it; it seemed too fantastic.”

“You didn’t have any collaborators?”

“No, not on this. Or—only Rita. I talked to her about it sometimes, but I swore her to secrecy. And she didn’t know I had finished.”

“Who’s Rita?” I said.

“You talking about Dr. Martinez?” asked Arthur. “Your doctoral advisor?”

Halliday nodded. “Collaborator now, and we’re very close friends. But she couldn’t be involved.”

“I don’t know,” I said. “Sounds like motive to me, stealing a colleague’s secret proof to publish yourself.”

Halliday snorted. “I would sooner believe Rita capable of murder.”

Arthur and I exchanged a look over her head, but Halliday’s gaze had unfocused into the distance, and she missed it.

“How did the robbery happen?” Arthur prompted gently, after a moment.

“Wednesday I came home and—there was no sign someone had broken in, nothing,” Halliday answered. “But all of my notebooks were gone. Just gone.”

“What about your computer?” I asked.

She shook her head. “I work in longhand. I was only just now going back through the proof to rewrite it for publication—so many years, so many dead ends and notes, and...they took it all. I went back to my office immediately and found my work here cleaned out, too. Even though none of it was relevant to the factorization problem, they still took everything. And the next morning I found the note.”

“I’ll go by your house in a few hours with some equipment,” said Arthur. “And then we’ll come back and look at your office again. Don’t handle nothing you ain’t touched already.”

Halliday made an abortive gesture at the books and papers surrounding her. “I have to...my work—”

“Can wait,” Arthur said.

“He’s right,” I put in. “Take the day off, go have a stiff drink or three. We’ll call you.”

“I don’t drink.”

Of course she didn’t. “Then sit in a park and read some combinatorics papers or something. What else do people do to relax?” I asked Arthur.

He gave me a funny look, but addressed Professor Halliday instead. “Sonya, she’s right. Go get some coffee; try to stay calm. We’ll figure this out.”

“Things don’t always work out, Arthur. You should know that better than anyone.”

Arthur didn’t reply, though his movements hitched for a second before he became the supportive friend once more, nudging Halliday gently to her feet. “Give me your keys, okay, hon? We’ll call in a bit.”

She obeyed, and Arthur guided us out of her office and locked the door.

“You going to be okay?” Arthur asked.

She hesitated. “My biggest fear is—I don’t know if I can recreate it. My greatest achievement, and I don’t even know...what if it’s gone?”

Arthur took her by the shoulders. “Ain’t gonna make you no promises I can’t keep. But Russell here is the best there is, and I ain’t too shabby myself. Take this one day at a time, okay? We’ll call.”

She nodded.

“Come on. We’ve got a lot of work to do,” I prodded Arthur.

He squeezed Halliday’s shoulders one last time. As we headed off at a trot, he glanced back several times to where she stood thin and bereft in the hallway.

Well, this sucked for Arthur. Of course, that didn’t mean I wasn’t going to take his head off the moment we were out of sight.

CHAPTER 3

IN THE END, I was very well-behaved. I waited until we were in the car. Arthur was pulling out of the visitor's parking lot and had the gall to say to me grimly, "So, I get this is a big deal. Can you give me the layman's rundown?"

"You first," I said. Penguins could have gotten frostbite from me.

He hesitated. "Me first what?"

"Fuck you," I said, though I couldn't force as much vitriol into it as I wanted. "The client will pay my rates?"

"You'll be paid—"

"She didn't want me there. She didn't even want *you* there."

"She came around, though, right? I knew she'd let us help if—"

"You lied to me."

"Okay, yeah, but I didn't know if—"

"If what?" I bit out. "If I'd come along if you weren't paying me to?"

"You got to understand—she's too important to me. I didn't mean—I needed you; I ain't thought—"

"You thought if you said, 'hey, Cas, help me out,' that—what, I'd say *no*?" Voicing the words stung. I bit my lip.

"Well, to be fair, money's what you always—and you can't be too hard on me, Russell, if this ain't no official job for you, can you take it anyway?"

It was a fair concern. After all, Arthur knew what happened when I wasn't working—he was one of the few. That didn't mean I wanted to concede. "You could have asked me. For the record, I'll be *fine*."

"I'm sorry," he said, though I didn't hear much repentance in his tone. "It was too important; can you understand? Please? But I'm sorry. I am."

"So who is she?"

He took a long breath. "Sonya and I—we grew up together. Childhood friends."

"And then?"

"And then what? Life happened. We grew apart. Ain't mean I don't still care about her." He kept his eyes glued to the road in front of him, like someone who wasn't telling me anything close to the whole story. "So, uh. This math stuff. Help an old guy out—why is the world ending?"

"This isn't over," I grumped, but I let him change the subject. For now. I slumped in the passenger seat, sticking my boots up on the dash. "Do you know anything about encryption?"

"Not a thing."

"Okay. Well, a whole hell of a lot of our current crypto depends on the idea that factoring large integers is a really hard problem. In simple terms, we encrypt information by multiplying large prime numbers together, and the fact that no one can *un*-multiply them easily is what keeps everything secure. And 'everything' means everything—from your credit cards to the Department of Defense."

Arthur let out a low whistle.

"Yeah," I said.

"So Sonya cracked the crypto?"

"Sort of," I said. "The ticket is, we've always *thought* factorization was a hard problem, but we've never actually known it was hard. Nobody'd ever proven it was."

Arthur frowned. "Why's everyone use it, then? Seems kind of unwise."

"Not that unwise. A lot of really smart people had been working on the problem of integer factorization for a very long time, and nobody'd come up with a fast way of doing it. Key word being 'fast'—we *can* do it; it just takes years, far too long to be useful in code-breaking. So building an

encryption algorithm based on the fact that nobody'd ever discovered a way to do this quickly, well, it was actually pretty genius."

"Except Sonya found a way," said Arthur.

"Yeah." I still couldn't believe it. As grave as the situation was, part of me was ravenous just to read her proof. "Yeah, she thinks she did."

"And you say everything runs on this math."

"Yeah. Checker might know better than I would where all it's being used, but I'm pretty sure it's across the board. Every financial transaction people send electronically. Our whole economy, national security, all of it."

"Jesus, Mary, and Joseph," whispered Arthur. "So if whoever got her proof decides they're bored just making themselves rich..."

"Modern apocalypse," I said. "It's possible. I think we've got a little breathing room, though. Professor Halliday said she was in the midst of going back through decades of notes and rewriting the proof for publication—it'll take them time to organize and absorb all her work. And they'll probably need someone in the field to help them with it. Plus they'll have to write whatever actual computer code they want to use—I'll have to talk to Checker and see if he can estimate how long that'll take—"

"Wait," said Arthur. "Did you just say they'd need a mathematician even if they have her notes?"

"Yeah," I said. "Probably more than one."

"*Shit,*" said Arthur, yanking the wheel to slue the car toward the next exit, "Sonya—she ain't safe—"

A car slammed into us from behind.

Metal shrieked and the seatbelt wrenched me across the chest. The car spun more than 180 degrees and slid into a skid across four lanes of freeway, traffic screeching by us the wrong way around—

I reached for the wheel and yanked it over, Newtonian mechanics erupting in my brain like a fountain. "Accelerate!" I bellowed in Arthur's ear; he immediately let go with his hands and slammed his foot down on the pedal.

"Switch with me!" I shouted, diving for my seatbelt release with my other hand and cursing Arthur's insistence that I wear it. Horns deafened the air in a cacophony around us, and a screeching crash blasted through

the noise as if it were right next to my ear—two cars avoiding us had smashed into each other and one had flipped over the median. I swung the wheel the other way with a solid wallop of inertia, sending us barreling between a semi and a minivan as I brought us out of the skid. The minivan's driver jerked away, and it turned directly into the path of a bright blue sports car. I could have screamed—not that you could have heard it over the deafening explosion of metal and kinetic energy. “I wasn’t going to hit you!” I yelled in pure frustration.

I got my foot down on top of Arthur’s, and he tried to get out from behind me, but I just ended up sitting half on top of him. It would have to do. I glanced in the rear view mirror—it wasn’t hard to spot the car that had nailed us. A black SUV with its front end smashed in careened dementedly through traffic, a deranged monster set on plowing through anything to get to its prey.

“Hang on!” I shouted.

Possibilities. Probabilities.

The quickest way to lose them would be to leap the cement median—nothing to it, just hit the correct angle, bam—and zip down the busy freeway in the opposite direction. We’d get away free and clear, but I knew from experience that a lot of drivers would spin out of control trying to avoid me, completely ignorant of the fact that I was perfectly well able to avoid them. I might not lose sleep over the collateral damage, but Arthur was in the car, and he definitely would.

If I was looking for as few civilian casualties as possible, that meant getting off the freeway *now*.

I glanced to the right, the cars overtaken in my vision by their velocity vectors, arrows of speed screaming down the lanes. I yanked the emergency brake to lock us up and spun the wheel, sending the car into a sideways skid again across three lanes of full-speed traffic like we were Super Frogger, the cars just missing us as they zipped by. Horns blared, but I didn’t hear any other crashes. I whipped the wheel the other way to seesaw Arthur’s sedan onto the exit ramp, my mind already racing ahead. The freeway had been okay, but LA traffic isn’t a possibility; it’s an inevitability. Once I hit the streets I might have a parking lot to deal with.

I glanced in the rear view again. The SUV was swerving onto the ramp after us, and someone was leaning out the window with, of all things, a

grenade launcher.

What. The. Fuck.

Options, options—where were we in the city? I hadn't been paying much attention, but I briefly remembered seeing signs for the 5...

The river. We could make it to the river.

We hit the end of the exit ramp and I aimed for the edge of the road, thanking fate that Arthur had been driving an older tank of a sedan. I wrenched the wheel as I felt the jaw-jolting bump of the curb and spun us up on two wheels, slamming the car onto its left side as we slued around the backlog at the end of the ramp and onto the street. It was jammed, as expected, but we flew through the intersection and I pointed the car at the sidewalk, our right two wheels walloping down onto it so we were straddling the curb. Arthur grunted behind me and people screamed outside. I laid on the horn and popped the accelerator to jump the curb completely and come off the road into a car park.

We were in some sort of industrial area. I zigged through the rows of parked vehicles trying to get us westward—it couldn't be far now. Another glance at the mirror showed the SUV had been slowed by the intersection, but it was still dogging us, their gunner trying to line up a shot with the *freaking grenade launcher*—

I hit a bank of railroad tracks and we thumped over them, the sedan almost shaking loose from its frame, and then the river was ahead.

During summer, the Los Angeles River can only be called that charitably. In the midst of the high heat it's a trickle of water through a wide, high-walled concrete ditch; instead of a river it looks more like something that was built for an industrial park to keep a thin stream of toxic waste away from contaminating anything.

I jammed my foot down on the gas pedal until it hit the floor, and we sailed off the high bank of the concrete trench. The car's wheels spun uselessly in the moment of weightlessness before gravity took hold, and then we belly-flopped on all four wheels into the bare cement at the bottom of the channel.

I'd been running stress calculations, but there was some guesswork here. I didn't know enough about Arthur's car, and it wasn't as if I could stop to look under the hood. Fortunately, the tough beast of a sedan took off like a shot, and I floored it northward along the river. I was still half-

pressed against Arthur behind me; I could feel him shifting and struggling to hang on.

Behind us, the SUV flew out onto the edge, and couldn't stop in time. Whoever was at the wheel made the idiot decision of trying to brake, and the ponderous vehicle flipped up over into a nosedive and plunged headfirst into very unforgiving cement.

The person with the grenade launcher must have thought fast—about to die a flesh-crunching death, he still managed to aim and pull the trigger.

Grenades aren't quite as fast as bullets. I had a precious millisecond to see just how it was going to impact us. I saw the explosion, shock waves, concussion, outlined in concentric circles of force like it was a diagram on a map of the impact. I saw the overlapping patterns of death depending on what type of grenade it was, and how far we would have to move to be outside the radius of danger.

Saw the infinite options of how I could move the car in the split second I had, and that none of them would be enough.

I jerked the wheel one last time and bounced us into the wall of the concrete channel. And then fell as the car flipped.

Metal screamed and glass shattered as the car skidded up onto its left side and screeched down the riverbed. I clung to the steering column like a monkey to avoid being scraped off with the side panels; behind me, Arthur jammed his fists against the roof.

The grenade hit.

I'd mooned it with the bottom of the car to protect us. The impact exploded against the river wall and the concussion cannonballed into our undercarriage—

—with way, way, *way* more force than I'd anticipated. Even with the most generous estimates. Even for a high-explosive round.

The shape of the blast imprinted itself mathematically in my brain as it clipped the sedan and slammed us into a barrel roll. But the equations didn't do me any good. I found fancy ways to obey the laws of physics; I couldn't rewrite them.

A rolling car is sheer mass. So massive its momentum can't be stopped, so massive the force of gravity smashes it into the earth like a rag doll, so massive that a person, no matter how strong or skilled or

mathematically-knowledgeable—a person couldn't stop it. The sides and top of the car imploded alternately as we crashed into the concrete again and again, and there was nothing I could do. I tried to brace myself but only managed a local optimum—I saved myself from being crushed to death but didn't avoid a three-hundred-sixty degree beating by twisting, reaching metal.

The car teetered in what I knew would be its last roll, balancing on its side in an infinite moment of indecision, and then pancaked over onto its roof.

My body smacked down into concrete and metal and glass in the twisted hole where the windshield had been, and everything stopped.

My ears rang in the silence. I tried to roll over, glass crunching beneath me. Arthur was upside down, hanging from his seatbelt, blood smeared across his skin from minor cuts but no major injuries visible. He was scrambling at the seatbelt release, yelling something. Yelling my name.

“Hey,” I said. “Look at that. I saved us.” I passed out.

CHAPTER 4

“HEY, GIRL. You with me for real this time?”

I batted weakly at the wet cloth being dabbed against my face. “*I* was going to be that,” I slurred.

“Russell? You was gonna be what?”

I came more fully awake and tried to sit up. The room spun immediately. Lines of space and time crisscrossed each other in sick, twisted, impossible ways. I had no warning before I was turning to the side and vomiting up every meal I’d ever eaten, and then vomiting up stomach lining. At least, that was how it felt.

“Whoa! Whoa, sweetheart. Lie back down.” I kept my eyes shut, listening to Arthur’s voice as his hands guided me. The stench of sick filled the air. “I’ll clean up. Lie still for a touch.”

I heard him start moving around and cautiously tried cracking my eyes open again. Everything was still squiggly and strange, but at least it wasn’t so wrong anymore. I was lying on a pallet in the corner of some sort of empty industrial warehouse.

Arthur finished what he was doing and came back; he supported my head and tilted a cup of water against my mouth. “Easy, girlfriend. Take it easy.”

I took a few sips and then pushed it away. “Status.”

“Got you out, grabbed another car, got you back here. Ain’t seen no one on our tail.”

God bless bad LA traffic and horrible police response times. “Where are we?”

“Bolt hole. Mine.”

“Wait, since when do you have bolt holes?” I’d been after Arthur to keep safe houses for years; I was shocked he might’ve actually listened to me. He tended to think I was paranoid.

Arthur cleared his throat. “Just the one.”

“Thank Christ,” I grumbled. “See? I told you so. It pays to be prepared.”

“Stop gloating.”

“Fine. What about Halliday?”

“I reached her. Told her to lie low. She’s going to her friend’s, Dr. Martinez’s—says she’s safe.”

“Good.” Well, unless Dr. Martinez was the one responsible for all this, I reminded myself. Fuck. I pushed my fingers against my throbbing temples. The violence was escalating so quickly... “Why wouldn’t they have just killed Halliday in the first place?”

Arthur flinched. “From what you said about deciphering the math, maybe they knew they might need her. Sides, the authorities would investigate a murder. They must’ve figured intimidation would work better.”

“And if they kill us, it doesn’t connect back to Halliday if no one knows about the proof, because there are a thousand other good reasons people might want one of us dead. Plus maybe killing us intimidates her more,” I said, thinking aloud. A ploy like that could have worked out very well for them, if they hadn’t failed at the killing-us part. “How did they even know she talked to us?”

“Ain’t no stretch to think they’re watching her. They track my license plate, find out I’m a PI...”

“Then they figure they’ll knock you off, and she’ll be real reluctant to hire anyone else,” I finished. I pushed myself up into a sitting position, and my stomach bucked and heaved again. I swallowed hard against it and almost choked. Stupid body and its stupid limitations. “We should go pick her up,” I said.

“Was just waiting on you. You good?”

I wasn't, really—every time I tried to hang onto a coherent thought, my brain got all loopy, as if it wanted to do what my stomach had done. Concussion, a pretty bad one. A lot of other things wanted to hurt as well; I pushed it all away and stood, steadfastly ignoring the way the world wobbled. "I'm always good. Let's go. Hey, you have an unburned phone?"

Arthur fished a disposable out of his pocket and handed it to me. "Talked to Checker already. I think I was able to explain the gist. He's looking into what he can."

Maybe someone had left electronic fingerprints on Halliday's emails or something. Worth a shot. "You still want to crime-scene her house?"

He hesitated. "Might be too dangerous now. Let's get Sonya safe first; then we can figure out what next."

Two cars were parked inside the warehouse—one, presumably, the stolen car that had gotten us here (I started making mental bets on whether Arthur would find its owner and apologize afterward), and the second a boxy old compact. I reached for the driver's door.

"Not a chance," said Arthur. "You're concussed."

"I'm still the better driver."

He squinted at me. "You gonna be making calls?"

Jesus, my head was pounding enough already without him arguing with me. "Yes, and I'll *still* be the better driver. What if they try to run us off the road again?"

"And what if the cops see you on the phone? This car ain't registered. Can't get stopped."

I felt a brief moment of pleasure at Arthur's law-breaking—my paranoia *was* rubbing off on him; excellent—but it was eclipsed by frustration. "We're not going to get stopped. I've never been pulled over for that."

"You want to take the risk?"

"You want to take the risk we get attacked again?"

A muscle in Arthur's jaw twitched. "Speakerphone, then," he said, and went around to the passenger side.

"Fine," I groused.

I dialed Checker as soon as I figured out which way I was going and manhandled the clunky old car onto the freeway. Arthur kept glancing over at the speedometer, but for once he didn't tell me to slow down—probably too worried about his friend.

Checker picked up on the first ring. “Arthur?”

“It's Cas.”

“Cas! Are you okay? Arthur said—”

“I'm fine,” I cut in. “Arthur gave you the lowdown on what's going on?”

“Uh, yeah. And holy crap. I'm buying gold as we speak.”

“Hopefully it won't get that far. Have you found anything?”

“A little,” he answered. “The professor's home and work computers were both woefully insecure, despite the fact that she works in cryptography—shocking, I tell you. I read through all her recent communications—”

Arthur made an uncomfortable noise.

“Was that Arthur?”

“Yeah, you're on speaker,” I said apologetically.

“Right,” said Checker. “Uh. Sorry, Arthur—we need the intel, right?”

“Find anything?” said Arthur unhappily.

“Aside from the fact that I'm pretty sure whoever stole her notes cloned her hard drives, because it would be easy so why not do it, yes, I did. First of all, the note she showed you guys was emailed to her first, probably right after the robbery.”

“She didn't mention that,” I said.

“Because she didn't see it. It went to spam. That's probably why she didn't get the note until the next day.”

Hmm. How had the perpetrators known their email had gotten spammed? Maybe they'd left spyware on her computer. It didn't seem likely they would've broken back into her office unless they'd known they needed to.

“Also, you know the email she sent to her friend at the NSA?” Checker continued. “The reason she approached him wasn't that she was robbed. She started talking to him about the proof a few weeks ago, way before the

burglary. I'm guessing she thought to start checking in with him about NSA possibilities after she finished the proof, but maybe she wanted to sit on the result for a little while before turning it over. Point is, that's a pretty big coincidence."

"What is?" I said.

"The timing," said Arthur. "You think the NSA stole her proof?"

"I think the NSA is probably listening in on this conversation, but I don't think they'd try to run you off the road with military hardware," said Checker. "No, I think someone else read that email and drew the right conclusion. She wasn't talking about this proof to anyone else, right? So how did the thieves know about it? As sexy as higher math can be, somehow I doubt they were randomly spying on a theoretical mathematician just in case she discovered something with applications."

"We should talk to her NSA friend," said Arthur.

"How do we do that without giving Halliday away?" I asked.

"Good point," said Arthur. "I'll think about it. Meantime, can you do a deep background on the friend?" he asked Checker. "And find out who might've had access to Sonya's emails?"

"Already on it."

"Hey, Checker," I said, "If you had her proof—how long would it take you to make it start working for you?"

"You mean, how long to code it into an algorithm?" Checker ruminated for a few seconds. "Oh, geez. Um...it sounds like it's pretty long, so even if I managed to understand it—and there's also the issue of figuring out the best way to attack—I'd say weeks, at least. Maybe longer."

"Good," I said.

"Except not," Checker contradicted. "Because, seriously, what's our plan here? They have the data. They've probably made digital copies of all her notes by now, whether or not they understand the proof. Even if we get the original work back, we can't ever be sure we've recovered the actual knowledge—in fact, we can be pretty sure we haven't."

"One step at a time," said Arthur. "Let's figure out who has it."

"Well, Pilar's on her way over here; we're going to fine-tooth all the data we can get our hands on." Pilar was Arthur and Checker's office manager, and a damn good researcher, even if she didn't tear through

firewalls like tissue paper the way Checker did. “We’ll find out who’s behind this, Arthur. I promise.”

“Hey,” I said. “Maybe you guys should go somewhere else. If they figured out who Arthur is, they might come after you.”

“Unlikely,” said Checker after a heartbeat. “I’m not digitally connected to Arthur or the business at all. I keep that wiped clean.”

“You do?” I said.

“Yeah. Arthur has enough interactions with, uh, unsavory people that it just seemed best for all concerned. I mean, most people who know me personally know I work with Arthur, but anyone who can make the connection in the other direction is probably someone I’d have to go off the grid to be sure of avoiding, and unless we know there’s a danger I think it’s more important right now that I have access to all my equipment. And I doubt I’d be anyone’s first priority if they wanted to...uh...”

“If they wanted to get to me,” said Arthur heavily.

“I’m keeping tabs,” Checker assured him. “On everyone—uh—you know. I’m tracking Professor Sonya’s phone, too. She’s been staying put.”

“Good. Thanks,” said Arthur.

“I do absolutely promise I’ll run away if it looks like there’s going to be any danger to us, though—running away is an excellent and noble option that you two should try more often. Oh—Pilar’s here. Anything else? If not, we’ll get to it.”

“Call us if you find anything,” I said.

“Of course I will.” He hesitated. “Hey. Arthur.”

“Yeah?”

“I can’t believe I’m the one saying this, but this might be a job for the authorities. Especially since the bad guys probably aren’t going to be able to make good on the note’s threat yet. I know you want to protect the professor and all, but an agency like the NSA would have resources we can only dream of, and they’d be able to start putting safeguards in place, at least for the most sensitive government systems. I might like to say I favor anarchy, but when actually faced with the prospect of an economic meltdown—”

Arthur squeezed his eyes shut. “I know. I know.”

“They’d probably be just as likely to recruit her as throw her in a cell, you know. Uh, sorry. I guess that doesn’t sound comforting.”

“Sonya never wanted—” Arthur sucked in a breath. “I guess now it don’t make no difference. You’re right. But you said this would take weeks, right? For them to figure out her notes? Give us twenty-four hours. If we can’t contain it, I’ll make the call myself.”

“Twenty-four hours,” Checker echoed. “Got it. Guess we’d better get cracking, then. Talk to you soon.”

Checker hung up. Arthur ran a hand over his face and leaned back against the headrest.

“Hey,” I said. “Chin up. We’re pretty damn smart.”

He didn’t answer for a moment. Then he said, “Don’t like this. Don’t like none of it. We’ve got people trying to kill us, and Checker and Pilar, I worry—”

“At least Pilar’s got a gun,” I said.

“She *what*?” Arthur whipped around to face me, so fast he tangled himself against the seatbelt. “Where the hell did she—”

“I gave her one,” I said. “She didn’t tell you? She begged me to teach her to shoot when you wouldn’t—thanks *so* much for sticking me with that, by the way.”

“I ain’t said I *wouldn’t*, I said—” He cut himself off with a curse. “I told her I would!”

“Yeah, well, she said you were all reluctant about it or something. Your office manager really should be armed, you know.”

He swore again. “That ain’t the world I want to live in!”

How beautifully hypocritical of the man with a carry permit. “Well, when you get around to fixing the world, you let me know.”

“At least tell me you taught her to be safe with it, taught her muzzle and trigger discipline—”

“I told her to point it at the thing she wants dead,” I said. “She’s a smart girl. She’s not going to shoot herself.”

“What the—*shit*, Russell! That ain’t no way to teach someone firearms. The safety of it’s gotta be second-nature!”

“Then you start taking her,” I said. Excellent. Teaching Pilar marksmanship hadn’t been as tooth-jarringly painful as I’d expected, but I still wasn’t going to pass up a chance to get out of the obligation. “Now will you let me watch the road?” The concussion was making my vision fuzzy around the edges, but I wasn’t going to admit it.

We made good time to Pasadena. Dr. Martinez’s condo was in a pleasant, modern building full of wide windows and balconies. I had my hand under my jacket on my Colt as we got out of the car, just in case.

Arthur pulled out his mobile as we climbed the steps. “Better let her know we’re here so they’re not surprised.” He dialed.

And listened, worry overtaking his features. She hadn’t picked up.

“Maybe her phone ran out of battery,” I said. “Or, I don’t know, maybe she’s taking a nap.” I inched my Colt halfway out of my belt.

“Maybe,” said Arthur, but he put his phone back in his pocket and slid one hand against his holster.

We stepped up onto the porch and I leaned on the bell.

No answer.

“Shit,” Arthur said softly.

I drew my gun, keeping it hidden from the street behind my body. “You got your lockpicks on you?”

“Cover me,” he said, pulling them out.

He slid the picks in and turned the knob. “Behind me,” I said as he pushed the door open, and I crept in crosshairs-first. Arthur dropped back so I could take point and eased the door shut behind us with a click.

The entryway led into an earth-toned living room in a jumble of disorder. The coffee table and several chairs were knocked off-kilter, with some needlepoint and photographs dangling askew and scattered across the floor. A set of shelves had fallen to lean precariously against the back of the couch, books and papers strewn across the furniture.

The disarray wasn’t too bad—just enough to tell the story of a struggle.

“Oh,” said a weak voice.

Arthur swore and slipped past me into the kitchen, holstering his Glock. I followed and saw a pair of stumpy legs sprawled over the ceramic

tile, attached to a woman slumped against the refrigerator—a woman who was not Sonya Halliday. She was a very tiny older lady, with copper-toned skin and a face so creased with wrinkles she reminded me of a walnut. A cap of gray hair still shot with black gave her a few years back, though right now the hair was wet and matted, and the ice-filled washcloth she held against it was being dyed a deep red.

“Hey. Here. Let me help you,” Arthur said, crouching beside her. “Arthur Tresting. I’m a friend of Sonya’s.”

“I know,” said the woman. I couldn’t tell if it was pain or age that made her voice hoarse. “She told me to expect you. But not the other men. Five of them. They took her. I couldn’t stop it.” She lifted a pair of enormous Coke-bottle glasses from the floor beside her and perched them on her nose; they gave her the look of an enormous insect. “Humanity is Incomplete, you know. Even more than mathematics. Sometimes we strive for correctness and we find ourselves outside the axioms, independent, cut free to blow in the wind. Then we define new axioms, or we acknowledge the evil within ourselves. I can’t say which is the better path. She told me what happened between you.”

Arthur stiffened slightly but didn’t answer. He was carefully probing her scalp wound with the wet washcloth. “I ain’t think it’s too bad. Russell, clear the house and find me whatever first-aid supplies she got.”

Two minutes later, I had cleared all the rooms and double-checked they were free of Sonya Halliday and her kidnappers, and Arthur had ensconced Dr. Martinez on her couch and was dressing her shallow scalp wound. He kept gently suggesting she let him take her to the hospital, or at least call up his doctor friend to come check if she needed stitches.

“I don’t need stitches. They tell us we need so many things in hospitals, but they’re wrong.” Martinez had picked up a pen and was fiddling with it, but not the way most people fiddled; she was unscrewing the pieces and taking it completely apart, then laying the bits out on her lap in an orderly array before picking them back up and putting them together again. After which she started the whole process over. “I’m fine. Sonya’s the one who needs help. She told me you’d agreed to help her. It’s my fault, you know.”

“Course it ain’t,” Arthur tried to assure her, at the same time I said, “Why? Did you tell someone what she was working on?”

“Me? No. But she wouldn’t have been working on it if it wasn’t for me. I led her into catastrophe. To the end of things. All the way from the beginning—I recruited her, you know. She reminded me too much of myself. Oh. I talk too much.” She screwed the pen back together, clicked it open, clicked it closed, then began unscrewing it again. Every so often her gaze behind the enormous glasses would skitter across Arthur or me, but never long enough to make eye contact.

Arthur pulled his phone from his pocket and tossed it to me. “Get Checker on security cams. See if he can track whoever snatched her. Dr. Martinez, let’s get a doctor to look at you, okay? It’s safer.”

“‘Safer’ is a funny word. Not well-defined. Since the certainty is that we will all die, ‘safer’ does not, to me, seem to have very great meaning.”

“Don’t be an idiot,” I snapped, paying more attention to punching the phone buttons than to her. “You can define it as per probability of death or injury in the immediate moment or near future.” God, if there was one thing I hated it was people trying to make math fuzzy.

A smile bloomed on Dr. Martinez’s face. “You’re right, of course. She’s right,” she added to Arthur. “Though I would argue that the degree in meaning becomes less according to the probability distribution for one’s remaining time. If one is old, and near death...”

I tuned her out as Checker picked up, and I gave him as rapid a rundown of the situation as I knew how.

“Searching now,” he said immediately. “How long ago? Ballpark?”

“Hey. Martinez,” I called. “How long ago did they bust in?”

She paused, as if calculating.

“Estimate, Professor,” I ordered.

“I have no bounds,” she said helplessly. “No, that’s incorrect. Not hours, surely. Yes, that’s right. And I was out here when they left. Where they left me. So more than the time I used to move from here to the kitchen afterward.”

Christ save me from literalists. “Sometime between ten minutes and two hours ago,” I translated into the phone, with a good helping of sarcasm. “But I bet I can narrow that down for you.” I strode back into the kitchen and surveyed the bloody washcloth filled with melting ice that Arthur had dumped in the sink. Enthalpy of fusion, the likely heat flow

from Martinez's body temperature to the ice cubes—if she'd come straight to the kitchen after the kidnappers left—"I'm guessing we missed them by twenty minutes to half an hour."

"Got it," said Checker. "Okay, I'm hitting pay dirt. Five men, and they've got Professor Sonya. They're taking her to a van—God, what a cliché. I'm tracking it. Call you back."

"Thanks." I hung up and headed back into the living room. Arthur was trying to get a bandaged-up Martinez to sit down, but she was moving obliviously around the living room picking things up and setting them straight.

"Doc, you just got your head split open—"

"Material things shouldn't make a difference," she murmured as she reshelfed her books. "One should be able to isolate oneself from outside stimuli. But it's never so simple, is it? Healing surroundings for healing physicality."

"Not when you got the injury fifteen minutes ago," said Arthur. "Sit down, Doc. I'll pick up a bit, if it's that important to you—"

"You'll just get it wrong," she said serenely, retrieving some small stone carvings of animals and placing them carefully in front of the books. "My mother believed these would watch over me. Protect me. I think she was both right and wrong about that."

"Russell," said Arthur with relief as he saw me. "What'd Checker say?"

"He's tracking the van. He'll call."

"Good. That's good." He turned between Martinez and me, rubbing the back of his neck with one hand, and I could practically see him trying to weigh all the options, wondering if we should call in the authorities, wondering if they'd only slow us down.

I stepped closer to him, passing him back the burner cell. "You call this one; I'll follow your lead. But I'm better than a tac team, and you won't have to wait for a warrant."

He looked down at me for a second and then nodded. "Hey, Doc." He cleared his throat. "Can you tell us any more about who would have known about Sonya's proof? 'S not like she was palling around with criminals. How'd this get out?"

“It’s easy to listen to us, you know,” said Martinez, still concentrating on arranging her stone animals. “Phones, email. You could write a program that scans for keywords quite easily, I think. It’s not paranoia, it’s just fact; you accept it and live in the modern world or you don’t.”

Arthur had stepped over next to her while she talked. “Doc. Are some of your books missing?” He gestured at the lower shelves. Martinez had picked up most of the books, but the bottom shelves were still bare, a light outline of dust showing where their contents had sat.

“‘Missing’ is such a poorly-defined word,” said Martinez after a slight hesitation. “Nothing is missing if I say it isn’t, or everything is missing if I say it is. I’ve been reorganizing.”

“Doc,” said Arthur inexorably. “The men who took Sonya. Did they take some of your work, too?”

“No. Except in my friend’s head.” She pressed her palms against her reshelfed books, and her voice shook. “Mathematics makes me a god. I understand the secrets of the universe. But I couldn’t stop them.”

I couldn’t say I didn’t know how she felt.

CHAPTER 5

“ARTHUR,” I said. “Call it.”

His face tightened for a long moment, then he nodded and strode over to the landline. He picked up the cordless handset and turned to press it into Martinez’s hands. She looked at it bewildered, as if she didn’t know what to do with it.

“Call the cops,” said Arthur. “Tell ’em what happened. Tell ’em I was here and left. Did you touch anything?” he added to me.

I thought back. “No.”

“Leave her out of it, okay?” Arthur said to Martinez, pointing at me. “Tell them it was just me, and that I came to help you, and I’m investigating it myself now, too. If I stay, they’ll want to ask questions, keep me here, and there ain’t nothing I can tell them that you can’t.” His jaw bunched, and I heard what he wasn’t saying—that he needed, *needed* to be out there tracking Halliday’s kidnappers, and not tied up with the police for hours answering an interrogation. “Got it, Professor?”

“Police rarely have the best interests of the individual citizen at heart,” rambled Martinez. “Contradiction, isn’t it? But I rather think they view themselves as being in the interests of the State instead. The goals of the collective are not always the goals of any person within it. And competence is often predicated on desire.”

“Yeah, well, they’re gonna have desire in this case, ain’t they?” said Arthur impatiently. “They’ll want the proof enough to help find Sonya.”

“Her safety is the only axiom,” said Martinez. “It’s astounding, how confusing that can make things.”

“It ain’t confusing,” said Arthur. “It ain’t confusing at all. Sonya’s in danger, Professor. Make the damned call.”

She fingered the handset. “I don’t like talking to people.”

I suspected at that moment that Arthur was showing superb control in not letting loose on a little old lady with a string of profanities.

“But I shall,” said Martinez. “It’s for Sonya. For Sonya. Her safety.”

“Yes,” said Arthur, taking a deep breath. “Yes.” He waved at me to follow him and strode toward the door, already dialing his mobile.

“Martinez is about to call the cops,” he said to Checker as we headed down the steps. “Make sure she does it, please.” He listened for a moment and then glanced back at me. “He’s scrubbing you from the security footage outside here.”

God bless Checker and his many talents.

“Get in touch once Martinez calls, and we’ll plan,” said Arthur into the phone, and hung up as we got to the car.

“You think she won’t?” I said.

Arthur hesitated. “Not sure.”

“You suspect she’s involved in this?”

“Think it’s more likely she’s just a touch different from most people. A woman that age arranging to get herself bashed in the head? Don’t jibe.”

“Maybe her plan went wrong,” I said, shutting the door and putting on the stupid seatbelt to mollify Arthur.

“Maybe,” said Arthur, “but my gut says she really cares about Sonya. I remember back—she was more than an advisor; she was Sonya’s mentor. And it seems that ain’t changed. They’re as close as family, you can see it.”

I couldn’t, but human interaction wasn’t exactly my forte. “Where to now, then?”

“Well, after this morning, first let’s figure if we got a tail, and—*wait*.”

I froze, the key hovering next to the ignition.

“Your seat’s different,” said Arthur. “Don’t press the pedals, but tell me if I’m right.”

I stretched out my foot next to the brake. He was right. The seat had moved back by almost an inch.

“Well, crap,” I said.

Arthur reached up and jammed a key into the housing of the rearview mirror to pull it apart. He pried the whole mirror off the windshield and dropped it between his feet, pushing at it with the side of one boot so he could get a view under his own seat. “I’m clear.” Very slowly and carefully, he leaned across the console and put his head down by my feet, where he could see under mine. “Yup. Car bomb.”

“Great,” I said. “How’s it put together?” The last thing I needed was to be stuck here until the police arrived. Or, well, blown up by remote. That would probably be worse.

Arthur fumbled out a pen light and clicked it on. “I ain’t no expert, but it looks like a tilt fuse,” he said after a moment. “Those are what’s most common right now anyways.”

“What’s a tilt fuse?” I wasn’t an expert either, though I’d defused a bomb or two in my time by following the math. The things had a logic to them, after all.

“Mercury in a tube. Car hits a bump, it goes boom.”

“So I can get out?” I said. “You know, carefully?”

“Russell,” said Arthur, poking his head back up to meet my eyes seriously. “*I ain’t no expert*. Could well be a pressure sensor I ain’t seeing. The cops are on their way—they can call a bomb squad.”

I tried to decide whether explosives expertise was worth risking getting mixed up with cops.

“Russell,” said Arthur, as if he knew what I was thinking.

“Take a picture of it for me,” I said.

“I ain’t gonna—”

“Take a picture, or I’m just going to get out.”

I wasn’t sure I would, but Arthur didn’t know that. He swore under his breath as he felt around for his cell phone and then ducked back down with extreme care. It was nice to have a friend who would put his face up next to a car bomb for me, I reflected.

The flash went off twice. Arthur eased back up and handed me the phone.

The tangle of wires in the darkness under my seat didn't actually look too complicated. I let my senses relax into the logic of it. If A, then B. If *not* B, then not A...

"I'm good," I said.

"Russell, this ain't worth risking your life. You can't be sure—"

"I'm sure enough," I said. "But get out and walk about..." I squinted at the payload. Not large, just more than enough to take out the car, with probably even odds on a secondary explosion from the gas tank. "About thirty feet away." Just to be safe.

"Russell—"

"Go," I said, putting my hand on the car door handle.

He swore at me again and then eased his door open to slide out. He jogged across the street, head swiveling up and down the road—probably making sure no one else was nearby.

I took a deep breath and pressed the door handle up until it clicked and released.

Nothing happened.

I eased the door out. Slid one foot down over the edge and onto the pavement very, very gently. Then, instead of transferring my weight bit by bit—just in case I'd been wrong about the lack of pressure sensor—I levered myself out of the car all at once, quick and clean, not jarring anything as I launched out into a dive that became a roll that became a run.

I reached Arthur on the other side of the street, panting.

"You an idiot," he said, his voice shaking a little.

"Of the highest degree," I answered, looking around for a rock. "We both are, though. We knew they were trying to kill us; we deserved to get motherfucked there."

"I was thinking they might leave someone to tail," said Arthur, an edge to his voice. "Thought they wouldn't risk sticking around with guns, as they couldn't know when we'd call in the cops. Ain't figured on no car bomb, though."

Okay, so I was the only idiot. Dammit. I didn't like it when Arthur made me feel stupid. He wasn't able to do it often, but more often than most people.

Arthur pulled out his phone. "Gotta let the authorities know there's a live bomb on the street here. Think I should probably stay and meet them after all. Make sure no kids come by or nothing."

"Oh, I wasn't planning to leave an active device behind," I said.

"Glad you feel that way, but trying to defuse it—it's way too dangerous. Even experienced techs use robots if they can. The cops—"

"Who said anything about trying to defuse it?" I said, picking up a smooth stone from the decorative landscaping around an ornamental tree. Small, but small might be even better in this case. "Cover your ears."

"Russell—!" Arthur cried, and then he had to duck and throw his hands over his head, because I threw the stone.

I fastballed it, a line drive straight into the open car door that would give it a perfect reflective angle to bounce off the floorboard and under the seat so it smashed into the mercury tube.

The fireball was disappointing. It only engulfed the car within the frame, and the gas tank didn't go. A nice contained explosion. The grenade launcher from earlier had made me think these guys were prone to overkill, but maybe not.

Or maybe they just knew their explosives. The grenade had been far more powerful than I expected, I remembered. Shit.

Still, now at least my fingerprints here were conveniently taken care of. I shoved Arthur in the arm. "Come on. Cops coming, remember?"

He glared at me, and we hustled down the street.



"THOUGHT YOU said we'd play things my way," Arthur said, when we were settled in another stolen car racing away from the scene. We hadn't heard sirens behind us, but I was sure that even if Martinez hadn't made the call, at this point I'd done it for her.

"Right," I said. "Sorry. What now?"

As if on cue, Arthur's phone buzzed. "Yeah," he said, putting it on speaker.

"We saw the explosion," came Checker's voice, not entirely steadily. "What the *fuck* are these guys on—"

"Checker," said Arthur.

He cleared his throat. "The cops just arrived. And bomb squad."

"Good," said Arthur. "What else have you got for us?"

"You don't want to talk about the fact that we just saw street cam footage of you two almost being blown to kingdom come? These people are—"

"We tracked down Professor Halliday's NSA friend," cut in Pilar's voice, as if she could sense Arthur's growing impatience. "His name's Dr. Xiaohu Zhang. He's got a PhD from Berkeley and all the good creds; I think he and Professor Halliday know each other all the way back from then. And he's been working as a mathematician for the NSA for almost twenty years. As far as we can tell, he's a good guy. There's nothing irregular in his bank accounts, he has a wife and three kids, he volunteers planting trees and coaching Little League...pretty much your typical all-American dad."

"Who happens to work for a government spy organization that has far too much power and far too little oversight," put in Checker grumpily.

"What I'm trying to say is, we don't think he's involved," said Pilar. "Arthur, if you want to—I think this could be a guy you could go to for help."

I grimaced. "Even if Zhang's okay, he's not going to be the one who calls the shots here. His bosses are going to take it out of his hands."

"May I point out that you already called in the police?" said Checker. "The NSA is going to be involved sooner or later, and I remind you that we probably *want* them involved—and without the delay of the local cops kicking it up to them. They're going to have a hell of a lot more resources for finding Professor Sonya than the Pasadena PD will, and plus, remember the whole possible-economic-apocalypse? The proof was stolen before we ever made it on the scene, and there's no putting that genie back in the bottle."

Arthur exhaled sharply. “Sonya’s safety is my only concern right now—but you’re right, rather she be in trouble with the Feds than hurt.”

“If you’re ever coming to rescue me, don’t make those your priorities,” I said.

Arthur threw me a black look. “Here’s what we’ll do. I can’t give up no chance on this. Where’s Zhang now? At work?”

“No, he took the day off today,” said Pilar. “He’s chaperoning his daughter’s class trip to the tar pits.”

“Even better. Pilar, you go talk to him.”

She hesitated. “Okay.”

“You’ll be fine,” said Arthur. “Just be honest about what’s going on. Checker’s right, we got to go in whole hog here, ain’t no point in dancing around no more. You can even tell him I’m on my way but I sent you first. Leave Russell and Checker out of it—I want ’em free to keep at this thing without the government coming knocking, so tell ’em it’s just me. But don’t worry about hiding nothing else, got it?”

“Got it,” said Pilar.

“I’m going to keep looking into this a little longer before breaking off and joining with the Feds. Checker, you got anything else?”

“The SUV that tried to kill you has hit police impound,” said Checker.

Arthur nodded. “I’ll pull some strings, get in to take a look.”

“While you do that, can I have Cas? I could use her help for the van tracking. Extrapolation is sort of your thing,” Checker added to me.

“Done,” said Arthur. I wondered if I heard a hint of relief in his voice that he wasn’t going to have to wrangle my differences in method for a while, and then wondered if I was being paranoid. He’d asked me in on this, hadn’t he?

As a last resort. Because nobody else knew enough math. Not because he wanted me on the job with him.

“You’re sending Pilar into the lion’s den. You realize that, don’t you?” The accusation spewed out harshly as Arthur hung up. It wasn’t what I wanted to say. “If the NSA thinks she’s involved, or just thinks she’s hiding anything, they could bury her.”

He scrubbed a hand across his face and didn’t answer.

Something ugly in me pressed me to keep talking. “Checker, too. He’s not going to have been able to wipe his connection to you enough to hide it from the NSA. You’re making them both vulnerable.”

“What do you want from me, Russell?” Instead of snapping at me, his tone was quiet. Desperate. “I don’t know what’s right. Don’t know what to do.”

Fuck.

I drove in silence for a few minutes, hating myself.

“I’ve got a bike near here in a storage unit,” I said finally. A peace offering. “In case you don’t want to steal another car.”

“What? Yeah.” His spoke as if his mind was a million miles away. “Good. You take it. Ain’t got no license.”

“Okay.” Neither did I, but then, I didn’t have a real driver’s license, either.

“Just gotta pray the NSA are the good guys here,” Arthur murmured. “Think they are, but I seen enough corruption to—ain’t got no choice, though.”

I didn’t agree, but I pressed my lips together. He didn’t want my opinion.

“Hope Dr. Martinez is all right,” murmured Arthur. “She’s gonna think we’re dead. That the bomb got us.”

The non sequitur threw me. “So will the bad guys. That’s part of the reason I did it.”

“And to keep the street safe,” Arthur added absently.

He always had a higher opinion of me than was warranted, but at this particular moment I wanted to deck him for it. Instead I just didn’t correct him.

CHAPTER 6

I PARTED ways with Arthur and jetted my sport bike up to Van Nuys, a slightly less glamorous neighborhood in the Valley where people who weren't movie stars could afford to live. I parked the motorcycle a few blocks from Checker's house and snuck around the block and through his backyard, just in case there were already eyes on him. Not that it would help if the men in black came knocking. Fucking NSA.

Checker's computer cluster and workspace was a converted garage he had affectionately nicknamed "The Hole," and I pushed open the side entrance to find it a flurry of activity. The space was already crowded, what with the stacks of computer towers and monitors wallpapering it on all sides, and in the small space in the middle Checker was zipping his wheelchair back and forth and throwing tablet computers at Pilar while trying to tell her things she obviously already knew.

"Just make sure that—"

"I know!"

"And if they say—"

"I *know*! I've got it!" She tucked the tablets into a satchel. "Hi, Cas." She flashed me a big smile. Pilar was a perpetually friendly, perpetually energetic young woman, curvy and attractive and warm and exactly the type of person most people wanted to be around. In other words, the opposite of me.

"Kick ass for us with the Feds," I said. "You're packing, right?"

Her dark skin flushed a little, and she reached toward the small of her back self-consciously. “Yeah. It feels funny. Um, you don’t think I’ll have to—”

“Better to be prepared,” I said. “Just remember, in a gunfight the person who lives is the person who’s more willing to pull the trigger.”

Pilar made a scrunched-up face like she had just tasted something bad, and Checker cleared his throat and spoke up. “Can I just say—that does not sound like the most, uh, *sane* approach to gun safety—”

“Those who refuse to learn to handle firearms aren’t allowed to talk,” I said, crossing my arms.

“For the last time, guns aren’t my—”

“Don’t you have somewhere to be?” I said to Pilar, loudly, over Checker’s annoyed squawk.

“Yes, uh—yes, I gotta go. I’ll be okay,” she added in Checker’s direction. “Good luck to you guys, yeah?” She gave me another smile, not quite as big as the last one, and squeezed by me out the door.

Checker reordered his various tablets and laptops in her wake, then grabbed the long desktop and pulled his chair over to a large flat screen monitor. “For the last time, I don’t believe in guns, okay?” It was an argument we’d been having for months. “Story, end of.”

“You’ll start believing real fast the day someone shoots you,” I said. “Where are we?”

He rolled his eyes and started clattering away at a keyboard as he talked. Skinny and hyper, Checker didn’t sacrifice anything in the way of energy to Pilar, though his was more of the manic and terrifying variety. “You’ve got a workstation there,” he said, pointing to a monitor that had just unblanked itself. “If you can pick up tracking the van, I want to keep working on facial recognition on the goons. Nothing useful’s popped so far, but I still have a lot of avenues to try.”

“I don’t know how your program things work,” I groused, plopping down in the chair Pilar had vacated.

“Really? *Really*? You with the superpowered math brain who can figure out the abstraction behind an undocumented program in a night can’t handle doing calculations via a graphical user interface? Quit

whining and do it.” He pointed at another monitor. “Go forth and constraint propagate. This is for Arthur, remember.”

He was right, dammit—I could be pissy later. I told myself it must be the vestiges of the concussion that were still making me grumpy. I rubbed my eyes and took a glance at the way his program was set up—I got a sense of the mathematics right away, the calculus of moving objects, the grid of cameras and other surveillance he could hack into, the ever-expanding search algorithm and, yes, constraint propagation. I fiddled with it for about forty seconds, plugging in different values, and narrowed down his heuristic empirically until the bounds almost touched.

“You can do a lot better,” I said. “Faster for more likely inputs. If you make it probabilistic—”

“That’s why I wanted *you* here,” he interrupted. “Just do it. After this is over, you can help me reprogram the search. I’ll pay you in tequila.”

We started working. Checker was a bundle of nerves, tapping a pencil against whatever monitor he was at when his fingers weren’t going a mile a minute on the keyboard, and checking his phone every five minutes.

“Arthur has your number,” I said. “And Pilar hasn’t even gotten there yet.”

“I know, but what if—” He sighed and took his glasses off, tossing them next to the keyboard in frustration and going back to typing.

Hell if I knew what he wanted from me. Just like Arthur.

I kept working, mixing in manual checks of the maps in the area and pulling cherry-picked data from the program’s algorithms to figure into my calculations.

“Arthur’s lost a lot of people,” Checker said suddenly, a few minutes later. “I’ll be damned if he loses one more, okay?”

“I didn’t say anything,” I bit out. “I’m helping, aren’t I?”

“I know. I know. I’m sorry.”

But Arthur hadn’t thought I’d be willing to jump in, either. He’d probably only forced himself to call me because he was willing to go to hell and back for this woman. To try everything.

Even me.

“What is it with him and Halliday, anyway?” I groused.

“What do you mean?” asked Checker. “He’d do the same for you, or me, or Pilar, or—or anyone else close to him. You know that.”

I sincerely doubted the part about me. I rubbed my eyes again and reapplied myself to the computer, hating everyone. My head still throbbed.

Checker stopped typing for a moment and leaned back. “They were best friends since they were about five, okay? Until, uh, a few years ago. They got each other through a lot, as kids. At least from my understanding of it.”

“Oh, best friends,” I said snidely. “Is that what they’re calling it?”

“What are you, a thirteen-year-old?” Checker snorted and went back to his keyboard. “I know I’m the last person you expect to say this, but not everything is about sex. Besides, Arthur’s had himself figured out since he was about ten. I’d be very surprised if anything ever happened between them.”

I’d never heard of Sonya Halliday before last night, and here was Checker with her whole life’s history. Everyone else had known what was going on here before Arthur had pulled me in for dumb computational comprehension and hadn’t even trusted me to agree to be that.

I stabbed at the keyboard.

“Hey,” said Checker. “This might be the most inappropriate time to ask this ever, but are you okay?”

I kept stabbing. “Fine. It’s just a concussion.”

“I don’t mean *now*, although I’m glad to hear a concussion is included in your definition of ‘fine.’ I meant in general. Until today I hadn’t seen you in weeks. You’ve been ignoring all my messages—”

I tried to shrug him off. “I was on the job.”

“One, that’s never stopped you from mocking me through text before, and two, no, you haven’t been, at least not the whole time. I checked.”

“You were tracking me?” I put a little righteous anger into the words, even though I’d already figured he had been.

“Of course I was; I wanted to make sure you weren’t dead! What happened to coming over *here* to get your tequila on? There’s another season of *The X-Files* that’s begging us to play drinking games to it.”

“I didn’t feel like company,” I said, still concentrating on my screen. And maybe I’d been sick of trying to live up to his and Arthur’s standards,

sick of trying so hard to be the human being they saw me as. Sick of failing at it.

“I get that,” said Checker, oblivious. “You just seem—I know, I know, concussion. But...you know if you need anything, that I’m—I mean, you can...right?”

I was saved from answering, thank Christ, by hitting the jackpot. “Hey. I found the van.”

Checker was at my shoulder immediately. “Where?”

I didn’t know how to do any sort of fancy computer highlighting, so I traced a rough circle against the monitor with my finger, ignoring it when Checker cringed. He didn’t like people touching his screens. “It disappeared into this area almost half an hour ago and hasn’t come out.”

“Are you sure? There’s no way it could’ve—?”

I glared at him, and he shut up.

“Okay, I get it, you’re sure. Two possibilities, then: their base is in the zone, or they switched vehicles. Can you run the security footage on the border of your zone forward and—never mind, I’ll do it,” he said hastily, at my blank look. He started punching keys. “You know, you could learn to do this stuff in about three seconds if you gave half a crap.”

I didn’t answer. Checker and I drank and watched bad movies together fairly regularly when I wasn’t avoiding him. It was stupid to think I wouldn’t see him anymore if I didn’t need him for the computer junk.

Stupid.

“It’s a bit of a long shot, but we can put together a likely vehicle list crossing the boundary,” Checker said absently, his focus on the screen. “Most cars that exit within the right window will be registered to people statistically unlikely to be involved, especially as stealing one would probably put our bad guys on the police radar more quickly and conspicuously. I’m skeptical this will work, though—I’m betting it’s not a coincidence they stopped out of view of any security cameras. These guys are very good at staying hidden.”

“Because nothing says ‘discreet’ like coming after Arthur and me with a grenade launcher,” I said.

“You might think that, but I assure you, I’ve been trying to trace that SUV since this morning with no luck. It’s like it popped up out of

nowhere. I'm hoping Arthur will at least be able to get me a partial VIN. No, they might go in for the dramatic, but the way they've been disappearing in between—"

His hands froze on the keyboard.

"What?" I said.

Checker turned to one of his other machines without answering and started typing very fast.

"What is it?"

"I think—" His fingers slowed. "I think I know who it is."

"What? What do you mean? You found who has Halliday?"

"Well, I *can't* find them. But I think I would be able to if they weren't wiped."

"Hey." I snapped my fingers at him. "Make sense."

"I think it's the Lancer."

"Who's that?"

"A black hat hacker. A pretty infamous one. So much of what I've been trying to track has been wiped, and I just realized—it's his style, exactly. The way the information's gone missing—it's like a shadow. His shadow."

"Wait a second," I said. "Does this mean someone else would be able to trace *me* through data you've wiped? Because that doesn't make me feel terribly secure—"

"Oh, leave it to you to make it all about you. Come on, Cas. I'm the best. And whoever else—" He cut himself off with a cough. "It's different. This guy left traces."

But whoever this was probably *felt* confident he'd wiped the evidence clean. Just like Checker felt confident. And with the NSA's spying eyes being turned toward us right now...my thoughts soured.

"It's not like I can tell he did it," Checker continued. "It's more like, I can tell things are gone, and the work is trademark Lancer. Thus, I'm assuming. If the Lancer's not one of the people who has her, then maybe he's someone close to them. Or works for them."

I supposed there was nothing I could do about my own digital footprint anyway. Fucking information age. "How does this help us?"

“Because I might be able to trace him. Not to his location; he’s too good. But through his activities, by looking for his shadow, so to speak. I can figure out what he’s doing.”

“We know what he’s doing,” I said. “He’s going to code up an algorithm to Halliday’s proof and then they’re going to rob the world blind.” Shit, we’d been assuming the programming would take time, but these men already had half the equation: a computer expert who could do the work.

“But at least this is *something*,” argued Checker. “Maybe we can...I don’t know, lure him out?”

The idea hit me fully formed—something that would show both Arthur *and* the NSA, would let me solve this whole catastrophe once and for all. “No,” I said. “We don’t lure him out. We lure him in.”

“Huh? You mean you want to, to what—grab him and trade him?”

“No. Even if we got our hands on him, they wouldn’t trade the professor for him. He’s expendable. They can find another computer guy.”

“Hey!”

“You know it’s true. Halliday is the one they really need. Unless he’s the one in charge, they’d never trade him for her.”

Checker leaned back and crossed his arms. “All right, it seems like you’ve got an idea. Let’s hear it.”

“We don’t make them give up Halliday. We make them take me.”

“*What?*”

“We convince them somehow that she needs help. That I wrote part of the proof. Whatever. You drop whatever electronic hints will make them think that.” I ignored the edge of recklessness limning my brain. This plan was perfect. “It’ll work. I can pass muster.”

“Of course you can; that’s not the point!”

“What is the point, then?”

“That—that you’re trying to offer yourself up as bait to people who nearly *killed* you and Arthur just this morning, *twice*, and have already kidnapped another person and what would make you think they’d want to keep you alive once they’d finished with you anyway? This is a terrible idea!”

“Come on, have you not met me?” I said.

“What—I don’t—”

“No one can keep me in a box. They catch me, they’ll take me to Halliday, I’ll get us both out. Easy as pie.”

“No. No, no, no, no, no. I don’t mean to rain on your frankly impossible skill set here, but even you can’t always bust your way out in a second once you get locked in a cell. You’ve admitted it before! There are so many ways this can go wrong, starting with, what if we make you a lure as bait and they just kill you instead of taking you in? Or what if they kill Professor Sonya because they think they don’t need her once they have you? Or what if—”

“We’ll just stall them on the math until I can figure a way out,” I said. “And you can drop the electronic hints so they’ll think they still need the professor. I have total faith in you.”

His mouth worked. “I am not in favor of this idea!”

“Tough,” I said.

“Goddammit. Where’s Arthur? Where’s Pilar? Where is some sanity? Why am I constantly surrounded by people who want to throw their lives down as martyrs? I’m not going to help you become—”

“I’m not trying to be a martyr!” I insisted. This wasn’t about self-sacrifice; this was about *winning*. “You’re the one who keeps telling me this is for Arthur!”

He shut up fast at that.

“They might be torturing Halliday as we speak, and this is the best plan we’ve got.” I stood up. “Start planting the evidence for this Lancer guy.”

“And where are you going to be?” asked Checker unhappily.

“I’m going to go find the van. That’s not a large search area—once I get out there, it shouldn’t take me long.” It was something to do, and maybe I’d be able to track their base and blast straight through to rescue Halliday. Besides, I didn’t want to be in the Hole if the NSA decided to check in here—Pilar had probably found Zhang by this point. “We’re going to get the professor back. One way or another.”

And Arthur would fucking *thank* me.

CHAPTER 7

I RODE my motorcycle out east, to the fringes of the LA sprawl.

I had a Eulerian path planned in my head for the search zone, spiraling through the dusty, ramshackle streets with my eyes flicking back and forth for any sign of the van. About a quarter of the way along it, I spotted the windowless white vehicle sitting abandoned at the far end of a fast food parking lot, overlooked by a garish cartoon burger over an atrociously comic sign. I pulled up to the van, jacked into it, and drove off, leaving the bike.

I moseyed around a few corners until I found a patch of empty road under an overpass, where I'd have some time to look suspicious without a danger of passersby getting curious. As I parked and got to work, I cursed Arthur under my breath for splitting off. I wasn't nearly as good at crime-sceneing things as he was.

I scooped up a handful of fine road dust from the gutter and sifted it over various surfaces inside the van, blowing it off gently to look for fingerprints I could photograph and text to Checker—I'd picked up a burner of my own along with the bike—but the bad guys had been careful. The van was clean, and I only got covered in dirt for my trouble. I picked at the tires, but nothing recognizable in the treads leapt out at me. Mathematics might be useful for a lot of things, but it didn't give me Arthur's skills at observation.

I supposed I could take pictures, in case Arthur or Checker could find something useful in them later. I tossed my phone in my hand, feeling

petty about having hit a dead end. Maybe I should drive the whole van back as evidence.

A screech of rubber on pavement burst against the cement walls of the overpass, shattering the quiet, and I dove behind the van just as three black SUVs skidded around the corner. My first thought was that the NSA had been on the hunt and followed the van here, too—

Then automatic weapons fire tore through the air, shredding my hearing, and the windows in the van's cab burst apart in a shattering cacophony.

Holy shit, they tracked their own van!

I crouched against the tire well, drawing trajectories in my head and making sure the engine block was lined up between the weapons and me. My Colt was in my hand. I had eight rounds before reloading—how many men were there? With three SUVs, at least six guys would have come, and possibly more like twelve or eighteen. I listened, teasing out the gunfire—five people were firing right now, but that didn't mean there weren't more.

Screw it. I counted down from thirty, popped up as they reloaded, and fired at the first human being my gun crossed—a guy still in the driver's seat of one of the SUVs. A pistol barked just as I pulled the trigger, and a line of fire lanced through my shoulder as I sat back down, hard. A round had clipped the skin between my shoulder and neck, on the right side. Less than an inch over and it would have hit my jugular.

Shit. Well, at least I'd nailed one of them. And I'd gotten a glimpse. Eight people at minimum, and maybe more I hadn't been able to see.

There was a slight pause. Then a Molotov cocktail hit the ground right next to me.

My eye registered it in the instant before it landed, and I launched myself up in the breath of a split second, wrenching open the front passenger door of the van and pivoting behind it. An explosion crashed across my impromptu shield and the metal slammed against me like it wanted to flatten me.

My head ricocheted off the side of the van. My vision was vibrating. I couldn't hear. I'd lost my gun.

What the *fuck*, Molotov cocktails didn't *explode*—

Except this one had.

My hearing buzzed in and out, muffled and badly tuned. Shouts. Doors slamming. Boots tromping on the ground.

I stumbled back from the door that had protected me. The other side of it was on fire. So was a good part of the pavement where I'd just been sitting next to the hood, napalm or something like it coating every surface, flaming globs dousing the side of the overpass spectacularly. The heat scorched my skin, and my lungs strained with every breath as if someone were smothering me.

Somewhere in my head I registered that this must have been their own brand of modified incendiary, a nice little bomb helping splash the napalm around. A thousand times deadlier than a normal Molotov cocktail. *Great.*

A smattering of automatic fire tore into the van again, and I ducked, covering my head as more glass rained down. They couldn't see me—did they know I was still alive?

A soft click. I wasn't sure how I heard it; everything was still muffled and ringing; but my brain immediately knew: *lighter.*

Another flaming bottle soared over the roof of the van.

The world slowed only to the parabola of projectile motion. The bottle sailed down, tumbling end over end, the flame on the soaked rag flaring as the wind of its passage whipped at it.

I swung my arm down and around in a circle and came up right underneath it, like my arm was a freaking golf club, and smacked the heel of my hand against it, cupping it with infinite gentleness and then following it up with increasing speed until I let it fly back the other way, bottle strength estimates ricocheting through my head along with maximum decelerations because the one thing I *absolutely did not want* was for the bottle to break against my hand—

I felt the momentum transfer echo through my arm and the flame blistered me, and then the bottle was flying back the way it had come. Exactly the way it had come.

The world sped up again. My sleeve had caught fire. I smashed it against myself to smother it as I ducked.

The math of free fall meant I knew exactly when the bottle would hit the ground: height of zero, solve for time. I didn't hear the bottle shatter, because the explosion was too loud.

The van rocked against me like a giant had smacked it, the metal bowing and rippling as the concussion ripped through. My hearing rang out into complete silence for an instant before tuning back in. Screams tore through the air, the screams of men coated with flaming chunks of napalm, men being devoured by third-degree burns. The other side of the van was on fire; the napalm had splatted against the metal, and the flames lit up what was left of the driver's side window and licked up to rise in hungry spirals above the van's roof.

I dropped to the ground and pawed around until I found my Colt. The crushing heat pressed against me, making me heady and faint. The air molecules scorched my trachea.

My unseen enemies had devolved into chaos, shouting and shrieking. I rolled under the van—the narrow band of visible ground across from me was full of blood and fire and flailing limbs curdling into blackness as they burned. A few of the men had escaped the carnage and were still standing. I shot them all in the legs. And I didn't shoot to wound. I shot for the arteries.

Their feet splayed and collapsed under them, and blood spurted along with a few abortive bursts of gunfire. Bodies hit the asphalt and weapons clattered to the ground, and more people screamed.

It was hard to focus through the flames. It was hard to breathe. The sips of hot air kept choking me.

I'd counted six burning bodies on the ground and shot three more. That was nine, plus the one I'd killed in the SUV made ten. Would they really have sent more than twelve? Would they?

I might've gotten them all already. If there were any left, they were probably fruitlessly trying to stop their friends from bleeding out or burning to death...

Or they had their sights set on the van, ready to pop me the instant I showed myself.

I tried to think. My brain felt like it was cooking in my skull. My eyes scratched and watered; I tried to blink them clear. Options. What were my options?

Only one back quarter panel of the van wasn't on fire. I rolled in that direction and scooted back out from underneath, then snuck toward the tailgate, shrugging out of my jacket as I went. I stuck my gun hand under

it like a tent pole, and then poked the jacket-covered gun out past the back of the van.

More gunfire deafened me, and I yanked my arm back down, tearing the cloth off my Colt. It had one hole torn in it.

One hole. They'd fired fourteen rounds in two seconds with those freakin' automatic rifles, and only one had hit. *Idiots and their automatics.*

I had no time: I wasn't behind the engine block anymore, this heat was undoing me, and if these guys let loose, one of the rounds would eventually go straight through the van and hit me. But I didn't need time, because the gunfire had pinpointed their locations.

A little less than one chance in fourteen I'd get my hand shot off, depending on how fast I pulled the trigger. Thirteen in fourteen that I wouldn't. Those were pretty good odds.

I closed my tearing eyes, drew the trajectories in my head, and poked my Colt out again, this time with the muzzle pointed out and without a jacket covering it. My finger jumped against the trigger twice.

The second guy got a four-round burst off. Then I heard two thumps.

Better than I expected.

I took a choking, ragged breath and leaned against the side of the van. I had to move, I kept telling myself. Had to move.

I pushed off and stumbled away, at an angle so I was still hidden from the SUVs and the majority of the men I'd taken out. Just in case there were any more. I smacked into the cement of the overpass and slid down, breathing shallowly. The cement was cool. I pressed myself against it.

My head was ringing—or maybe it was my ears, or maybe it was a combination and I was concussed again. I concentrated. I have a fine-tuned awareness of my own body—it's necessary for me to align with the mathematics to take out mooks, but it's also terribly convenient for injuries.

Of course, that assumes I can concentrate.

It took me a few minutes, but I figured it out. Both ear trauma and another concussion. Fantastic. And I was suffering damage from the heat, my system going haywire in a dozen minor ways. Lungs. Skin. Eyes. Throat. My stomach flipping into nausea in response, as if it thought it could vomit up everything that was wrong.

The top of my shoulder was bleeding, too, though not badly. I mashed my torn jacket against it and concentrated on breathing. Inhaling stung, the air scraping through my trachea like it wanted to shred me from the inside out. Oh, and my left hand was in a lot of pain. Blistered. Some dermal trauma. Because it had been on fire. Right.

I kept my eyes and ears open—at least, as much as I could, through the tearing and the ringing—but the street was calm, and apart from the soft whoosh of the flames continuing to burn, I heard nothing. Good. I wasn't inclined to investigate until I'd definitely given the gentlemen I'd shot in the legs enough time to bleed out. There was still a chance one of them would have enough strength to pull a trigger, and why tempt fate?

I dug out a fresh magazine and reloaded my Colt. The metal was heavy. My fingers fumbled on it before managing to click the new mag home.

From here I could see the two men I'd shot last. The bodies were still, a pool of red gleaming around them, their rifles fallen across their chests. AK-47s, I noticed. Cheap and reliable, like a Molotov cocktail. I wondered what they'd put in the bottles to add the explosion—that was a neat trick.

Of course, it hadn't worked out terribly well for them.

I waited a few minutes longer than I had to. I told myself it was just to be safe, but getting up also seemed a little bit difficult right now. Finally I pushed myself to my feet using the wall and led cautiously with the barrel of the Colt as I came around the back of the van.

The carnage was gruesome, even by my standards. The corpses who'd been hit by the napalm had been blackened into an inhuman mess. Most of them were still burning. The stench in the air gagged me.

Around them, the area between the van and the SUVs had become a blood slick, the crimson gleaming in the low light under the overpass. One of the men I'd shot in the leg had attempted to tourniquet himself. It hadn't worked. One of the other men I'd shot had caught on fire after falling. I couldn't tell if he'd been dead already when it happened.

I gave the massacre a wide berth.

One of the men twitched. It was hard to believe he could still be alive; his whole lower body was curdled and black, small flames still licking against him. I shot him in the head as I went past. It was the most merciful thing I'd done all day.

The van was still half on fire, as was the closest SUV. The vehicle next to it had a .45-inch hole spider webbing the windshield, and the driver slumped against the wheel in his own spatter pattern of red—the first man I'd shot. The third SUV was behind the other two, and had escaped more or less intact.

I thought about searching the other two vehicles, but I hadn't done great with the van, and even as isolated as this place was, we'd made a lot of noise. The cops might be on their way. I'd dallied here too long already.

I pushed my Colt back into my belt, got into the third SUV, and drove away.

CHAPTER 8

THE BAD guys—whoever they were—had put a tracker on their own van. They could probably find the SUV I was in, too. I stopped five streets over in a run-down residential area and stole a rusted junkpot from in front of a house that had grass that was far too long and cement blocks scattered in the yard. Then I hit the freeway, jumped down three exits, pulled off in a strip mall, and grabbed an inconspicuous Honda.

I was a long way out of LA proper and far from any of my bolt holes. I stopped at a drugstore and bought gauze, antiseptic, and a few other random first-aid supplies, using the self-checkout so I didn't get any nosy questions from a cashier. Then I went back to the Honda, sat in the driver's seat, and patched myself up, taping a dressing over the wound on my shoulder and wrapping the burned hand. The burn was an odd sort of discomfort—half pain and half numbness, with a stinging sensation underneath. I put it out of my head.

I'd picked up a new phone along with the medical supplies, having dropped mine somewhere in the fray and forgotten to go back for it. *Idiot*. I texted Arthur the new digits and then dialed Checker while I snugged the gauze over my hand; I put the cell on speakerphone and tore the tape with my teeth while I waited for him to pick up.

"Hello?"

"It's Cas."

"I'm guessing from the new phone number that something didn't go as planned. What happened?"

“Ambush,” I said.

“Good God. Are you all right?”

“Of course,” I said. My voice was scratching. “Though I left the street on fire. Have the cops found it yet?”

“You left the *street*—what—”

“It wasn’t my fault,” I said. “They brought napalm. Or something napalm-like. Has someone called it in yet?”

“Checking,” he said. “Aw, Arthur would be proud, you bringing in the authorities. This time of year LA’s a tinderbox; it’s not a bad idea.”

That hadn’t been what I meant, but I didn’t correct him. “It’s just north of the 263, off the Puesta del Sol exit.”

“Found it. Yeah, we’ve got fire department. And police, and...” He trailed off, a frown in the last words.

“What?”

“From what I can tell, the cops are being superseded by someone else. I can’t see who.”

“NSA?”

“I don’t know. Who attacked you? Who were these guys?”

“The same ones who ran Arthur and me off the road, I’m assuming,” I said. I finished my rudimentary first-aid, leaned back, and flexed my hand against the bandaging. Painful, but I had my whole range of motion.

“Did you get their pictures for me? License plate numbers?”

Fuck. I hadn’t even thought of that stuff. Like I always told Arthur, I was a shit detective.

“It’s okay,” Checker said, when I hadn’t answered. “I’ll be able to pull things from police records, though it’ll be a few hours before their CSU stuff hits the system. Can you believe it, you’d think in this modern era we’d have everything connected instantly, but no.” When I didn’t say anything, he prompted, “Cas? You there?”

I’d been thinking about the bad guys’ MO. AKs and Molotov cocktails were common as a bad haircut. But Molotov cocktails rigged to explode as these had, those were something more unusual...and they’d geared us up with a pretty nifty car bomb earlier...plus the souped-up grenade...

“Cas? You all right?”

I squeezed my eyes shut. My head felt like steel wool, sharp and stinging and a dirty tangle, and the nausea still nagged at me. Being in the midst of a street-sized bonfire for too long could apparently make you sick. Who knew. “I’m here.”

“Why don’t you come back to the Hole? We’ve got more data to track now. Maybe we can—”

“No.” My brain buzzed, trying its best. I hadn’t taken the van for that long of a ride before stopping and searching it...

I tried to think back. It was hard to focus. No more than fifteen minutes of driving, no more than seven spent searching the van before the SUVs had arrived.

Twenty-two minutes. They wouldn’t have wanted to go above the speed limit, not with the hardware they were carrying. Plus figure a couple of minutes for noticing the van was on the move and gearing up...

There wasn’t all that much out this way. And it was unlikely they would’ve expected someone to find the van in the first place, so no reason for them to have had men babysitting it. I was betting I could find their hideout.

“Cas, talk to me. What are you thinking?”

“I’m going to find their base,” I said.

“How?”

“I need a map,” I said.

“What?”

“A physical paper map. Where can you buy one of those these days?”

“Um, I don’t know. I’d stop at somewhere with Internet and print one, if I were you.”

“You’re the guy sitting at a computer,” I said, irritation bleeding into my voice. “Find out where I can buy a fucking map. On paper.”

“Other than Amazon?”

“Stop being a smartass.”

“Okay, okay.” He hesitated. “Are you sure you’re all right? You’re, uh, a little more snappish than usual.”

“I’m *fine*.”

“All right already. Um, it looks like your best bets are bookstores, travel centers, gas stations, or drugstores. I can call around to see who has some. Yes, yes, the antediluvian method of phone inquiries—I *could* hack their inventories, but that would actually be more work, believe it or not —”

“I’m at a drugstore,” I said. “I’ll check here first.”

Silence.

“Hello?”

“Why are you at a drugstore?”

I tried to dredge up a flip answer and couldn’t. My thoughts scraped uncomfortably against each other.

“Cas, are you injured?”

Bailing on the conversation was easier than answering. “No,” I said, and hung up.

The drugstore did, in fact, have a rack of local street maps. I bought one and went back out to my stolen car to unfold it.

I didn’t know when the bad guys had started out, but...*Estimate. Probabilities.*

I closed my eyes. Why did everything still insist on being so fuzzy?

Inner and outer search radii. Concentric circles of decreasing probability. Adjusted for the metric of road access and speed rather than straight-line distance. A jagged ring rose up in my head, clumsily centered on the location I’d been attacked.

I examined the map more closely. The direction they’d come from—they weren’t trying to hide anything; they’d meant to kill me. If they’d been going east on the freeway, they would’ve come from the other side of the overpass.

Half the circle faded out.

They’d had a fleet of at least four SUVs and the windowless van. Figure about fifteen hundred square feet just for those vehicles—that was the size of a small house. And they probably had more.

These guys had a ton of gear, but it wasn’t high-end or exotic, it was cheap and effective. This wasn’t going to be one of the more unusual enemies I’d gone up against—they weren’t Dawna Polk with her shiny

military precision and ornate secret base or Vikash Agarwal with his absurd ray gun and ridiculous mountain lair. These people were more like me. All about business.

Which meant I was looking for a building that had already existed, not an unmapped metal dome in the middle of the desert or a special underground staging area. The unpopulated bits of my search ring faded out, too.

And I knew what I was looking for. A large building, probably an industrial warehouse of some kind.

There weren't all that many places left to look. Doing a drive through all the most likely ones would only take me about five hours, depending on how bad rush hour traffic got out here.

Of course, there was a faster way.

I made a face, feeling like a child throwing a temper tantrum, and called Checker back.

He picked up right away. "Cas, hey."

I ignored the weight of all the worried questions he wasn't asking me. "I need you to check a few places for me," I said. "I'm looking for somewhere with a lot of space—more than a few thousand square feet—and away from prying eyes. My guess is a warehouse or industrial park in a place that's not all that well-trafficked. I'm going to read off some intersections to you—can you scan the satellite pictures or whatever for the surrounding areas?"

"These days a monkey could do that," he said with cheerful sarcasm. "It doesn't even take skill. Shoot."

"Off exit 55, up Hollins Road. Five and a quarter miles from the freeway. See anything?"

He paused for a minute. "Looks like mostly ranches."

Ranches. Lots of land, little indoor space. No room for fleets of vehicles someone wanted to hide from curious passersby—or from satellite pictures, come to that. "All right. Move up to exit 56."

We worked our way through my entire search ring. In less than twenty minutes we'd narrowed it to three likely possibilities.

"Do you want me to connect back up with Arthur or Pilar?" asked Checker. "If they sent a dozen guys after you with napalm—"

“No,” I said. “If the NSA tries to go in at the same time, we’re just going to get each other killed. And I’m better than they are.” Not to mention that the last thing I wanted was the NSA knowing anything about me. And I didn’t want to take the time to wait for Arthur—at least, that’s what I told myself. “I’ll find her.”

“Cas—”

“What?” The word might have been harsher than it needed to be.

“You’re not in this alone. There *are* people who will back you up. You know that, right?”

“You sound like Arthur,” I said, without thinking.

“Well, that should tell you something!”

I stopped at the passion in his voice.

It was true that Arthur had been trying, for upwards of a year, to bash it through my head that I had backup now. That I could ask people for help, if I needed or wanted it.

When he said it, it always seemed to make sense. In the moment, I either didn’t think of it or found a good reason to go it alone. After all, I always had sound logical reasons for what I did, didn’t I?

Didn’t I?

Like now. Arthur was busy following his other lead, and we’d find his friend faster if we kept working in parallel. Besides, it *would* take him ages to get out here—I wasn’t just being petty. I wasn’t.

And even if I weren’t hours east of the city, who else was I going to call? I knew a Mob sniper who still claimed he owed me eighty percent of a favor, but I didn’t trust him further than a nickel’s worth, not the least of which because his boss had been trying to freeze me out of the underground for a year now. I knew a forger who hadn’t sold me out when he’d had the chance, but that didn’t change the fact that he was a *forger*, not someone I could call into a firefight even if I’d wanted to. To be perfectly honest, the only person I truly trusted to be skilled enough to have my back was halfway around the world bashing corrupted warlords’ heads in, and that was even farther than Pasadena.

“I could call Rio,” I said, just to get a rise out of Checker.

“If you think you should,” said Checker after a moment, very stiffly. I almost laughed. He was going to strain something trying to avoid saying

what he thought about that idea. I suspected it was a rant about selling your soul to the devil to kill a spider—albeit a poisonous one.

“Maybe I *should* call him,” I continued. “After all, we’re talking potential global economic collapse; it might be good to bring in every gun.” Except that even planes could only fly so fast, and I wasn’t about to let this go on another twenty-four hours. I wasn’t inclined to call Rio away from whatever head-bashing he was engaged in only for him to arrive to find there was nothing left to do.

Having my pride wasn’t pettiness. And I was perfectly capable of doing this job for Arthur, without Rio or the NSA or anyone else.

“Look, these guys aren’t anything special,” I said to Checker. “They’re not psychics or robots or even creepy international black-ops people. They’re just your general run-of-the-mill criminal kidnappers with cheap automatic weapons.” And some nifty explosives, but I didn’t mention that. “I can handle them, okay?”

“Okay,” said Checker, the word fragile and drawn out.

“I’ll call you once I’ve got Halliday.”

“Okay. You’d better.”

I didn’t know why I found his concern so irritating.

CHAPTER 9

I ZIPPED the little old Honda out to the first industrial park Checker and I had identified. It was a sprawling complex of warehouses, with a network of driveways in between wide connecting parking lots. Through the gate at the entrance I could see rows of white tractor trailers, and beer-heavy men in jeans shouted to each other as they lowered loading gates and hauled crates in and out. The place was a beehive of activity. Several prominently placed signs indicated it might be an ice packing plant—or maybe shrimp. The picture on the sign made it hard to tell.

Checker had said he'd be looking into the people whose names were on the real estate I was checking out, but he'd warned me it might not be helpful if the bad guys were using well-laid shell corporations or simply squatting. It looked like he didn't have to investigate this one.

I drove to the next location.

The second neighborhood was a lot emptier. I slowed down as the road narrowed and the traffic dropped off. The buildings looming past the dirty curbsides were all either shuttered or boarded up.

This looked like a place I would choose to hide out in myself. I was betting the people who had Halliday felt the same way.

At this location, we'd identified a large abandoned factory as the likeliest base point for our bad guys, as it had the space and the lack of foot traffic. I cruised closer, and my back itched uncomfortably as I came level with the factory. *It's unlikely they know what you look like*, I reminded myself—after all, I'd killed everyone who'd seen me. And they

weren't going to be sniping random drivers who took a jaunt through the surrounding streets—that was far too good a way to get noticed.

The factory was a cluster of huge near-windowless buildings. A solid, high cement wall lined the curb in the gaps between structures, keeping hooligans on the street from wandering in, but the buildings themselves were the bulk of the barrier. Erratic graffiti dotted the wall here and there, but it was old and half-assed, as if even the graffiti artists lost whatever will they had as soon as they came out here.

Yeah. This place was perfect.

The main entrance had a solid metal gate that was locked up with a rusted chain and padlock. I drove on by. Two other entrances were similarly barricaded, and three corrugated metal gates looked like they'd lead straight into buildings or down into underground loading docks.

If they had any surveillance, it was likely to be at those points—and maybe along the wall, to see if anyone was climbing over. Squatting in a huge abandoned complex like this meant they probably wouldn't have wired the whole thing up for security.

Probably.

Well, there was only one way to find out.

I drove back around the complex to the end farthest from the freeway. The buildings abutting the street here were dilapidated: all crumbling brick and filthy, cracked concrete, with even the plywood nailed over the sparse, high windows dirty and warped. Considering how huge this place was, our bad guys had almost certainly based themselves in a more solid part of it. I'd break in here.

All the windows facing the outside were third-story or above, and stupid Arthur had told me to leave the C-4—I stubbornly ignored the fact that I hadn't wanted to take the time to pick any up anyway—but those weren't the only ways in. I did a noise calculation. Thick walls, the decibel levels of exploding brick and screeching metal. They'd probably hear me, wherever they were, but by the time they came to check out the noise and realized what had happened, I'd hopefully have Halliday already. Once I located the professor, skedaddling out of the complex and stealing another car—or one of the bad guys' own SUVs, if convenient—would be the easy part.

I pulled out a knife, pried open the steering wheel of the Honda, and cut out the airbag—airbags were too unpredictable, with too many variables attached. Then I fastened my seatbelt and adjusted my gun so it wasn't in the small of my back, slipped into reverse and zoomed the little car backward, and spun it around in a neat, tight doughnut so I was facing the brick wall.

Newton's Second Law. I needed enough deceleration against the wall, times the mass of the car, to generate sufficient force. Subtract the amount that would be absorbed by the hood crumpling—fucking safety measures—and backtrack through the equation to find the necessary speed at impact.

Oh, and check my own acceleration against the seatbelt. Wouldn't do to break through the wall only to kill myself. I wasn't fond of the idea of cracking a rib or two, either.

The numbers fell out pleasantly, provided I hit at the minimum necessary speed. Just bruising. Bruising I could handle.

The car was a stick shift. I pressed the clutch and revved the engine, watching the RPMs climb. Two thousand, three thousand—heading for the power band—

If I fucked this up I'd either smash into a brick wall and wreck the car with nothing to show for it, or go in too hot and put myself in the hospital. Maybe Checker had a point about asking for backup.

Well, too late now. I slipped the clutch and goosed the gas, and the car leapt forward like it had been shot out of a cannon.

The wall flashed huge in my vision for an instant. The crash was deafening.

The metal screamed like a living thing and the brick gave way with a boom like the earth had split open, rending itself apart in the path of the car and burying me with huge chunks of debris in the hailstorm from hell. The seatbelt yanked me back with over 30 Gs of acceleration; it split me in two from hip to shoulder and crushed the breath from my lungs. The windshield shattered in my face. I ducked my head and closed my eyes and the sky fell on the Honda's roof.

The car lurched to a halt, and the avalanche above my head completed itself with a fine shower of gravel and dust.

I unbuckled the seatbelt, my sternum aching like someone had slammed an iron bar against it. Maybe the bruising hadn't been such a good idea. The door was jammed up against the tumble of brick and cement chunks, so I climbed out the broken windshield instead, getting my feet under me and hopping through onto the crumpled hood. The metal was jagged and buckled, contorted into a steel sculpture of sharp points and deep dents and covered in broken brick.

I jumped down, my boots echoing on the cement floor in the wide open space. The inside of the building was dark, high-ceilinged, and empty—and huge, the cavernous nothingness fading away in the dimness. Rows of gigantic support pillars marched through the space like massive sentinel guards frozen in time.

I ran. My footsteps were loud against the empty floor. My chest throbbed with every pace, and it felt like an elephant was sitting on my lungs whenever I tried to draw a deep breath. *Dammit*. Fucking seatbelt.

With an effort of will, I pushed aside the injuries. I'd pulled my Colt without thinking about it before I'd even cleared the car, and I kept it at the ready as I slid out a side entrance of the building. Time to find where our kidnappers were holed up.

If they were indeed here, I reminded myself. I was going to be pissed if Destination Number Three ended up being the winner instead.

The shadows were getting longer as the day wound down, turning the abandoned factory into a weird play of looming walls and deep darkness. I loped toward the other side of the complex, where the buildings had looked sturdier. I'd start my grid search there.

Of course, searching buildings took a lot of time, and I was an impatient motherfucker. Besides, it might work to my advantage to kick the beehive a little more.

I found a crumbling tangle of scrap metal and other debris piled in a stairwell and pulled out a few hand-sized chunks of metal and concrete. Cradling my makeshift projectiles in one arm—I winced at taking the weight with my burned hand and wrist, but there was no help for it—I stuck my Colt back in my belt and ducked around the corner from the first row of buildings, keeping myself against the wall. Here inside the complex, most of the windows were still glass, and I'd been staying aware

of all those possible lines of sight and where the sniper vantage points might cross.

I tossed a chunk of brick in my right hand, figured out the arc— x -distance, y -distance, two possible solutions—and threw. The bit of debris crashed through the third-story window, the tinkle of the glass echoing in the emptiness.

I pressed myself against the wall, out of sight. Nothing. No goons scrambling with AKs, no napalm.

I threw through a second story window, then one on the ground floor. Still nothing.

I continued down the first row of buildings, and then moved to the second. Maybe I was wrong—maybe this wasn't the place, and I should go to the third location. I'd seen not a hint of any sort of security, of any response to my rabble-rousing.

Then I threw a rock through the third floor of the next building, and it blew up.

I ducked around the side of the building I was next to, dropping my debris projectiles and covering my head. The blast ended with a heavy rain of brick and concrete hitting the street at y -equals-zero from the height of the third floor.

I peeked an eye back out.

The building was still mostly intact, but the third floor looked like a monster had bitten it off, with only one corner of the walls still standing. The rest of it had been blasted away into rubble, and the wreckage blanketed the surrounding pavement in a tumble of cinder blocks and rebar.

And nothing moved.

What the hell?

Why would a security measure be blowing up their own building? And why hadn't it triggered any further security, any of their troops with AKs or their expanded-upon Molotov cocktails...

Oh. Because they weren't here.

A breeze blew through, and the settling dust pattered against my skin. Whoever they were, I'd missed them. They'd taken Halliday and run somewhere else, and left explosives behind for anyone who tried to

investigate what they'd deserted. They'd probably left hastily, probably planned to return, but figured if they couldn't come back to retrieve the rest of their base then nobody else would either.

Of course, they hadn't expected *me* to come by.

Whatever explosive security they'd had on the third floor had already been tripped, clearly, but I didn't think it likely their entire operations had been up there. After all, where had they stored their fleet of vehicles? That had to be on the ground floor. And there was plenty of gear and equipment they would've wanted closer to their escape route.

If I had a base I was wiring to blow...

I was betting that if I'd tried to walk in at ground level, the whole building would have gone up in a domino effect, but starting on the third floor had only tripped those security measures. After all, why would they think anyone would walk in on the third floor?

Which meant that was exactly what I was going to do.

I strode over to the building next door. It was taller, and sixteen and a half feet separated the two. I threw rocks through the windows just in case, but nothing blew.

I kicked a metal door out of its frame to get into the next-door building and searched around until I found a peeling wooden staircase going up. The top floor didn't actually have roof access, but I didn't let that stop me. I gathered a tottering pile of junk, climbed up on top, and busted out the ventilation system from the rotting ceiling. This building was in terrible shape, and it didn't take much for the air ducts to come crashing down along with a whole big chunk of roof, giving me my very own makeshift skylight. I leapt up, caught the edges of my hole, and clawed my way through until I tumbled out on the asphalt roofing.

It was slightly soft where I stepped when I stood up. But it held my weight.

I jogged over to the side of the roof.

The blasted-open third floor was a lot closer and clearer from up here. The crooked edges of the concrete backtracked for me like I was watching the blast in reverse, showing me exactly how they'd set the charges. Breaking a window had detonated them, but I'd been right that an

explosion from the second floor would've set everything off too. The rubble felt like the third act in a Rube Goldberg chain.

Which meant the first and second floors would definitely also be rigged.

The building they'd been operating out of had massive square footage, a long, square, ugly box of three tall stories—well, formerly three—with peeling siding and painted-over windows. Utterly unassuming, and more than large enough to house fleets of vehicles and whatever else this gang might need. Now I just had to get over there.

Sixteen and a half feet between the buildings, and if possible I wanted to clear the jagged edges of destroyed wall and the lion's share of the rubble. Fortunately, I was one story higher. I'd have more than enough time to fly the x -distance while I was falling, and the vertical distance was barely over thirteen feet. I'd fallen farther plenty of times.

Of course, the height difference meant I'd have to find a different way *out* once I made the leap, but I could figure that out once I sussed the demolition rig up close.

I walked along the edge of the roof, looking for the smoothest landing spot amid the rubble on the opposite building, and zeroed in on a likely patch of floor. I tossed some bits of roof over just in case anything was still live, but my landing area showed no evidence of being likely to disintegrate me. Good.

I backtracked to the middle of my roof to give myself a running start, did the final calculations, and then ran straight at the edge. I couldn't see my landing spot as I pounded toward the brink—only purple-blue sky, clear and empty, as if I were about to take off and fly past the end of the world.

I hit the lip of the roof and jumped.

My muscles rocketed me into the air, and I soared in a perfect parabola. An instant of weightlessness at the top—my own personal optimum, hanging above the earth—and then I accelerated downward, faster and faster, the rubble-strewn third floor of the other building multiplying in my vision until it became the entire universe.

I hit exactly where I'd aimed, and rolled out.

Ow.

I sat for a minute. Why had that hurt? Oh. Yeah. Napalm and street-sized bonfires and being shot and getting into an intentional car crash.

I coughed. *Dammit.*

I staggered up and surveyed my surroundings. Now that I was on the building, it appeared even more vast, a broad forest of rubble and nubs of walls. I began picking my way across. Every so often I caught sight of something that might have been part of the gang's base—a few loose papers crushed under concrete blocks, a broken computer monitor, a dismembered office chair—but mostly it was unidentifiable debris.

I stayed wary of any explosives that hadn't gone in the original blast, but the third floor had died a valiant death and thoroughly destroyed itself. I finally found a staircase—well, more like a ladder into a skylight now.

Very carefully, I stepped down.

My skin tingled as I transferred my weight from stair to stair. What if they'd rigged *everything* about the second floor, instead of only the perimeter like I expected? What if I jostled the wrong bit of wall or stepped on the wrong patch of floor?

I reached the bottom without blowing anything up. I took a steadying breath, immediately regretted it as my ribs twinged, and peered around, keeping my steps slow and my senses alert.

The second floor had been set up like a barracks. Bunks took up quite a few of the rooms, stacked on top of each other with no privacy. A rusted-out kitchen was replete with boxed MREs; I didn't think it likely the plumbing was working. A larger percentage of the rooms turned out to be empty—this building was, apparently, too big even for their purposes. I wandered between them, the light filtering through the painted-over windows creating an eerie interplay of shadows.

Whether or not the rooms had been in use, they were all set up to explode, though fortunately the setup was a lot clearer than I'd feared. The wiring crawled over the whole outside perimeter, cupping the second floor in a deadly closed circuit. What looked like military-grade plastic explosives were packed against all the support pillars. Foil wire spiderwebbed over the windows—that must have been what I'd tripped on the third story—and floor mats lined the walking space next to the walls. Any pressure on the mats would flip a relay and make the whole circuit detonate, I was sure.

I also saw now why the third floor had gone without triggering the others: they'd armed this as a demolition trap, with the bottom two stories going off first to start the implosion and then setting off the explosives above them almost instantly, leading in a mathematically neat way to the complete implosion of the building.

Which wasn't even necessary. Destroying the ground floor this way would have led to the collapse of the levels above it anyway, so they could have kept only the bottom floor set and connected any breach of their security system to that—but they hadn't.

Someone liked overkill.

I walked gingerly, cautious of where I put each foot, but they'd set up their charges so it was possible to live and work and walk here. The deadly security must have been prepared in advance, as this was too big a job to do in a trice after they'd sent the SUVs after me and then learned police were finding the bodies of their men, or whatever had spurred them to move base. Plastic explosives were stable enough to leave long-term—they had to have set this up from the beginning, as a contingency plan, and then wired everything live as they hightailed it. I avoided the edges of rooms and double-checked that each footfall was landing on bare wood instead of anything that could hide a pressure plate.

I crept down to the ground floor.

Here it was even more obvious they'd cleared out in a rush. The scattered detritus of a hurried flight was strewn across the floor—the odd knapsack or ammunition belt dropped in haste, tables knocked askew when the evacuation order had been given. Half the ground floor was a broad cement expanse they'd obviously been using as a garage; the smell of motor oil and burned rubber still pervaded the air, but all the vehicles were gone. I also found a bunch of storerooms and a room that had clearly been their armory. Much of its contents had been scooped up and taken as they ran, but there were still cases of ammunition, haphazard piles of blast shields and body armor, and large stacks of unlabeled boxes that probably contained plenty of things that would go kablooeey. It might be nice to raid some of this, when I was done here.

The charges on the first floor were more extensive than on the other two, every support pillar and structure densely layered with plastique and wiring that crept up and across the ceiling. The intended sequence of the

explosion kept playing out in my mind, the mathematics extrapolating forward for me and dropping the structure neatly into rubble in the shape of its foundation.

Overkill or not, this thing was a work of art.

I shivered. Between the Lancer and their explosives expert, these guys had some very smart people working for them. Smart and vicious. They'd done a very thorough job of making sure their artistic collapse would happen on top of anyone who came in here.

One long room served as a grungy computer cluster: lots and lots of machines, some dirty or old or partially in pieces. A smaller room in the back looked like it functioned as a manager's office, with a few more computers, a wall of binders full of papers, and several large filing cabinets. A squat, heavy fire safe in the corner was bolted to the floor, its heavy door hanging open, empty.

I sat down at the desk in the office, the one that looked like it had belonged to the big cheese, and leaned down to turn on the computer.

It was on already. Huh. I'd expected the hard drive to be gone and for the machine to be inert. I pressed the power button on the monitor.

Programming code appeared, white on a black screen. I scanned it—and then stood up very, very fast.

The people here hadn't been planning to blow this place only when someone came. They hadn't been planning to come back if nobody found their base.

They'd already set a self-destruct. The explosives would go in just over thirty-six minutes. And I didn't have a way out yet.

Fuck.

I wouldn't be able to stop it from happening. I might be able to see the math of the circuitry, predict the physics of the explosion, but I wasn't a bomb expert. I had half an hour to clear myself an exit, or the implosion would bury what was left of me.

CHAPTER 10

CLEAR AN exit. Easier said than done—this was not something I'd expected to be doing under a time limit.

I concentrated on the perimeter and filtered the charges into patterns, my brain following the wiring. Closed circuit, right. Elegant, but not complicated. A quick and dirty way to make sure nothing broke in—quick and dirty like Molotov cocktails and AKs, but fused onto the intelligence and competence necessary to rig a building this way...

I was starting to get a feel for these guys. Smart but lazy. Overly thorough in some ways but taking shortcuts in others. Willing to put the work into something they thought was *cool*, but bored with work in general.

Hungry for power but reveling in their arrogance from the shadows.

I shook myself. Closed circuit. Which meant as long as I didn't interrupt it, I'd be fine.

Probably.

I held my senses on the wiring pattern, on its logical progression, the overlay of explosives leading me back out to the garage and to the broad roll-up doors that led out of the building. Here was the weak point. They'd needed to get their vehicles out. The circuit didn't cross the doors like it did the windows, but instead flowed against the frame—I focused my regular vision instead of my mathematical awareness and found simple magnetic sensors. Magnet in the wiring, magnet in the door; if the door rolled up, the switch would trip and the circuit would break.

Okay. I could do this. All I needed was a magnet.

Well, that was easy. The power had to be working if the computers were, so I had electricity, and there was plenty of junk scattered about the base. Not to mention that they probably had tools and supplies in their storerooms that would have what I needed.

I sprinted back to the armory and the storerooms beside it and started digging through cardboard boxes and tool kits. I was in luck: not only did I find nails, wire, and duct tape almost immediately, but I also found a box of batteries, which would save me the trouble of jury-rigging a safe voltage from a wall socket. Twenty-eight minutes. I started to breathe more easily.

I hauled everything back to the garage and tossed it in a pile next to one of the roll-up doors. I sat on the cement floor while I wound the wire, going as fast as possible. Fatigue tugged at my muscles, and my chest and head still ached, though I tried very hard to ignore them.

My left hand twinged more every time I pulled another coil of wire tight around a nail. The bandage over the burn was caked in dust and starting to come off. I ignored that, too.

I connected up my batteries to the wire-wrapped nail and stood up. I might need speed, but I needed care more. I cupped the battery and wire-wrapped nail in one hand and brought my first little electromagnet near one of the sensors, testing the field strength very, very slowly.

Not good enough. I pulled the wire back off the batteries and wrapped another few coils around the nail before holding it up again and judging the slight tug against my fingers. If my magnet was too weak, it wouldn't do shit.

But the equal-and-opposite vector diagram lined up this time, telling me I was good to go. I duct-taped my magnet onto the frame in the skinny space between the explosive wiring and the door itself, wedging the nail up right next to the sensor. Then I repeated the process three more times for the other sensors on the door and stood back.

Time to spare: I had more than nineteen minutes left. My little wire-wrapped nails poked up cheerfully next to the door magnets. I should be able to open it up now.

As long as I hadn't missed a sensor or a failsafe.

I scanned the door one more time, wishing I could see electric and magnetic fields instead of only having their concentric lines spring up mathematically once I felt their strength empirically—*what the hell? Who can see EM fields?*

Laughter echoed in my memory with an edge of maliciousness, a scrawny dark-skinned girl arrogantly twirling a voltmeter across her fingers—

Dammit. Stop wasting time. I rechecked the wiring, trying to estimate a probability calculation of the likelihood I was missing something, but there were too many unknowns. No help; I had to go for it.

I put my hand on the chain. Took a deep breath. I probably wasn't about to get blown up.

Probably.

What the fuck are you doing?

For an instant the errant thought felt like another pointless scrap of memory, a voice from the endless past. But no. The vast net of explosives surrounding me suddenly mocked my nonchalance, bearing down on me with the weight of what I didn't know, of how much I might have missed, that any tiny error would see me blasted into bloody fragments blended with bite-sized concrete. The brutal calculations spun through my senses, extrapolating just how I would die.

I paused with my right hand gripping the cold links of the door chain, my palm against the metal going slick with sweat. This was a job like any other, I told myself. I always took risks for jobs.

A job? You're not even getting paid, and you're about to blow yourself up? This is ridiculous.

I had the sneaking suspicion the voice was right, but it was a moot point. I needed a way out of here, and this was a solid one.

Probably.

Besides, I thought pettily, if I blew myself up maybe Arthur would realize he should've appreciated me.

The voice of caution—or sanity—in my brain shook its head in disgust and departed.

I tightened my grip on the chain, and before I could second-guess myself I leaned my whole body weight on it and hauled.

The door screeched up on its tracks with a violence that made adrenaline spike into my bloodstream. I found my four little electromagnets with my eyes to make sure they'd stayed in place, even though if they hadn't, I wouldn't very well have had time to look.

I pried my damp grip off the chain and staggered back a few steps. A dusty breeze blew in from the alley outside, turning the perspiration on my face clammy. Without warning the urge to vomit redoubled itself, and my legs wanted to melt while my left hand started burning like a motherfucker.

Apparently my body knew how dumb I was being, even when I didn't. And it wanted nothing more than to walk right out and not look back.

But I still had eighteen and a half minutes, and fuck it, the dangerous part was over. I had my exit, and the batteries wouldn't drain in the time before the building pulverized itself. No reason to waste the opportunity.

I shoved down the nausea and sprinted back to the computer lab. As I might have expected, all the machines in the outer room had their drives pulled already, and I wasn't about to touch the one running the detonation code, but I went back into the inner office anyway. This looked like the place the boss had nested; any other information I could use would probably be in here.

My primary interest was in any pointer that would help me find where they'd taken Halliday. I hadn't seen any sign of her presence here, but then, I hadn't gotten a chance to search every room. Or who knows, maybe they'd kept her on the third floor.

The first file cabinet opened smoothly, unlocked, and it was obvious why—the contents had been pulled and taken, with not even an empty hanging folder left. Dammit. I'd been hoping for a list of shell corporations or real estate holdings, but I should have known it wouldn't be that easy. I checked the rest of the drawers, but they were all empty.

Fourteen minutes. I turned to the bank of binders on the wall and pulled some off the shelf to drop them open on the desk.

Math.

I stared. *What the fuck?*

Someone had printed out scores of mathematical journals and put them in binders. It was obvious why these had been left: they weren't a secret,

and would be more than easy to access again, print out, and put in more binders. But why would a gang of AK-wielding bad guys *have* them?

They'd wanted Halliday. They'd wanted her proof. But I'd assumed—and still assumed—that they wanted it to make them rich. The math I was looking at wouldn't do that, not in the least. I was familiar with these proofs, and many of them were abstract enough to be meaningless from any practical standpoint.

How many people, even smart people, chose to read about the computability of subshifts in their spare time? Who *were* these guys?

I spot-checked more of the binders and found the same: the inner office had an entire wall devoted to advancements in modern mathematics. I kept flipping through, trying to see if I could find a pattern in what was being studied here, but the subjects of the papers bounced around without focus, touching on one subfield only to go haring off into another. In a few places penciled notes were scribbled in the margins with connecting ideas, as if the reader was trying to understand the proof, but at least half the notations were clearly clueless, irrelevant scrawls with no understanding of the subject under discussion. Given the breadth of mathematics here, what boggled me wasn't that someone wouldn't be able to understand it all, but that a person would be so audacious as to *try*. Whoever this was had learned some levels of higher math, but was now determined to play at understanding every single corner of the field whether the attempt made sense or not. Halliday had spoken truthfully when she scorned such a thing as being nearly impossible—well, except for someone like me. And it certainly wasn't working out for the person here.

The only thing the handwriting did tell me was that the binders were all for one individual: the mathematical quirks of the slants and loops and jagged points among the scratch work told me only one hand was responsible for all of the notes. I tore out a few pages and pocketed them, leaving the rest.

A little less than eight minutes. I left the office and turned toward the end of the first floor that I hadn't walked through yet. I was extremely good at keeping track of time; I wasn't worried about running things too close.

I moved down the hallway and through a broad set of double doors to my left.

“Christ almighty,” I said aloud, and froze where I was. I’d stumbled into their explosives lab. A whole room filled with half-finished contraptions and experiments and tangles of wiring and dynamite and Semtex and who knew what else.

Holy *crap*. Someone had a hobby.

Some of this might get triggered when the building went. I made a mental note to be far enough away to give myself a margin of error and began to edge back toward the door.

A shadow moved off to my left. I spun on the spot, Colt in hand, and aimed before I saw who was there.

“Freeze,” said the large, hard-faced woman who had her own handgun pointed directly at my center of mass. “Place the gun on the floor and put your hands on your head. Slowly.”

CHAPTER 11

“I COULD say the same to you,” I said evenly. The woman’s aiming stance screamed law enforcement, which was both good and bad. She likely didn’t want to kill me, but on the other hand, she’d likely be very happy to put me in prison.

“Federal agent,” she said, confirming my suspicions. “Gun on the ground. Now.”

I’d probably have to acquiesce eventually, but I still had six and a half minutes. “NSA?” I hazarded. *Goddamn Pilar and Arthur.*

“Put down the weapon,” she repeated. Wow, she really had a one-track mind. “Put it down, and we can talk.”

“I’d rather talk right here,” I said.

Her eyes flicked around the bomb lab.

“I’m not one of the people who built this place,” I assured her. “I’ve been tracking them down, just like you.”

“Identify yourself.”

I should have been more suspicious of her sudden willingness to talk, but I missed it. “You first.”

“Department of Homeland Security. If we’re on the same side, put down the weapon.”

DHS. I wasn’t sure if that was better or worse than the NSA; I didn’t know much about federal law enforcement. I also didn’t know how willing she’d be to shoot me if I didn’t comply. “We don’t want to fire guns in

here anyway,” I said, shifting my weight so I moved toward the door by an inch. “Who knows what might go off?”

“I said freeze.”

I stopped moving.

“That’s a .45,” the agent observed.

The non sequitur threw me. “Nineteen-elevens usually are.”

“I just came from a scene where twelve people were killed with a .45.”

Technically only seven of them had been killed with the gun. The other five had been napalmed. I swallowed. If they thought I was responsible for a mass murder...I’d whipped the gun up into a two-handed stance, but my left hand suddenly started to go stiff and numb and angry-feeling. I flexed it against the grip, trying not to be too obvious.

“The work looked like self-defense to me,” said the agent, surprising me. “But it was also a sensational disruption of an active investigation.”

I licked my lips. “I’m guessing that ‘disruption’ is what led you here.” And through the door I’d conveniently left open for them. I tried to be pissy about that, but if they’d tried to come in another way, I’d be dead, too. “I’m guessing you’d still be chasing a lack of leads without it.”

“And I’m guessing it’s what tipped them off to leave this place an empty death trap.”

She had a point. I didn’t like it. “Well, if you saw what happened to those guys, you know how good I am. You probably want to point that thing someplace else.”

“If I did that, you might turn around,” she said.

“Put your weapon down slowly and place your hands on your head,” said a male voice behind me.

Oh, *shit*. So that was why she’d kept me talking. She had a fucking partner.

I started to lower the Colt when a click echoed through the room, far too loud in the quiet, tension-filled space.

My brain identified the sound before I’d finished registering it—some long-ago memory connected immediately, *danger, warning, stop, lost!*—but the female agent’s reaction confirmed it. Her expression went still and pale and tense and she actually took her eyes off me.

Her partner had stepped on something that was going to go boom.

Fuck.

“Sloppy,” I said aloud.

“Drop your weapon!” yelled the woman, apparently unable to react to both her partner’s imminent death and me. “Drop your weapon, or I will riddle you with holes! We’ll get the bomb squad in here—”

“There isn’t time,” I said. “This place is going up in just under five minutes.”

“Stop it!” cried the woman. “Turn it the fuck off, or you’re not getting out, either!”

“What? It’s not my bomb!” I protested. “I told you, I’m not with these guys—it was rigged before I got here!” I turned slightly so I could see the partner. He still had his sidearm aimed vaguely in my direction, though now he kept glancing down at his feet, and sweat had popped out all over his pasty face. He was young. Not even thirty, I thought. The junior partner, maybe even a rookie.

And he was standing on some sort of pressure plate. I scanned the tangle of wires and equipment and explosive material at his feet—I wasn’t sure, but as far as I could tell this was not only live, it was liable to go up if its unhappy victim so much as shifted his weight.

He was lucky. Most floor triggers didn’t *arm* the instant you stepped on them; they *detonated*. This type of device—well, it was all very Hollywood. I recalled my fleeting thought from before, that these bad guys had “cool” as their top priority.

The female agent was babbling something at me about putting my hands on my head, her weapon still targeting me as she dug out a cell phone.

“No time,” I said again, suiting my own actions to my words and tucking my Colt back into my belt as the mathematical puzzle crystallized. Weight, pressure—I knew what to do. “And put that away; a cell signal might trigger a detonation in here. Go to the armory—down the hall that way a hundred and twenty-three feet, turn left, and it’s on the right. Bring back as much ammunition as you can carry.”

Without waiting for a reply I scanned the long lab tables for raw materials. Most of what was left was connected up in ways I didn’t want to

disturb, but I spotted an orange brick of Semtex on the floor that had been overlooked in the hasty clear out. I dashed to grab that and a detonator.

The DHS agent hesitated for much too long and then turned and sprinted through the double doors. I followed suit, slicing at the Semtex with a knife as I ran. I swung through the empty computer lab and back into the inner office, where I mashed a little slice of my plastic explosive onto the large bolt on the squat, heavy floor safe, the kinetic energy and fracture strength overlapping in a fast back-of-the-envelope estimate.

I pressed the detonator in, got behind the desk, and pushed the button.

The *bang* shot bits of metal and flooring and debris against the walls of the office. I came back around to the safe, kicked the remains of the bolt away, and heaved the thing in my arms, the open door banging against my hip. I staggered and almost dropped it—holy crap, the thing was heavy. One hundred and three point eight pounds. Perfect.

Three minutes and fourteen seconds.

I shambled down the hallway as fast as my shuffling feet would go without unbalancing the safe. The burn on my left hand felt like I was putting a knife through it where the corner of the thing dug into my palm.

I made it back to the explosives lab and thunked the safe to the floor as gently as I could, open side up. The DHS woman was only a few seconds after me, pushing a wheeled cart stacked with ammo cans and cases. Good. I'd been afraid they hadn't left enough behind. Eight grams for a round of 7.62—and multiply—

"A hundred and seventy-three pounds, right?" I said to the man on the pressure plate, who was sweating so much he looked like he was boiling from the inside. A hundred and seventy-three point...four, I thought, including his gear.

"Something like that," he got out. "This won't work. It's not as simple as—"

"Then you have nothing to lose," I said, starting to tear the ammo cases open.

Two and a half minutes.

"I saw some blast shields back there," I tossed to his partner without stopping what I was doing. "Go grab some." This time she didn't hesitate before sprinting away.

The math here wouldn't be difficult. Just simple division: weight and volume. And then watch like a hawk to see where my darling victim was putting his weight so I could match it. The massively hard part would be the juggling act itself. And fuck, I'd probably pull a muscle.

Whatever. Man's life, and all that. Arthur was a bad influence.

I heaved over the first ammo case. The dimensions of the fire safe gave it a volume of just over five gallons, which would be enough, barely. I poured the cardboard box of ammunition inside, my senses alert to double-check the weight and keep track of where I was at. The rounds tinkled over each other as they filled the bottom of the safe.

"I'm telling you, this won't work," the male agent said again, his young voice hoarse and dry. "Go. Just go."

I ignored him. I was too busy updating the calculations and staying alert for any weight irregularities in the ammunition as it streamed in.

The other agent returned with a couple of blast shields. "What can I do?"

"Leave one of those here and get out," I said, without looking up.

"Like hell. Cliff—"

"Do it," said her partner. "You're not going to die here too."

"Noble of you," I said, then snapped at her, "Ninety seconds, *go*." She drew back and then hoofed it, thank Christ. I concentrated on Cliff, tossing the last few rounds into the safe one by one. *Tink. Tink. Tink.* "Okay, here's how it's going to work. When I say go, you're going to start transferring your weight off the plate very, very slowly. As smoothly as you can. Got it?"

"Got it," Cliff croaked. He slid his weapon into his holster and worked his hands at his sides, opening and closing sweaty fists.

I gathered my legs under me and heaved the ammo-filled safe. It was too heavy for me. My muscles protested, and my left hand screamed. "Go now," I grunted.

Cliff lifted one boot as if he were pushing through molasses.

"Faster," I gasped. "Just do it smooth."

His foot touched the ground.

The balance blazed through my senses as I let the bottom edge of the safe graze the plate, releasing the slightest bit of weight, then more and more and more and—shit, *less* as he wobbled, gathering the heavy metal box back into me—I levered the ammo-filled safe onto the plate ever so carefully, matching him bit by bit, releasing or lifting back tiny increments of the weight as he teetered, the ammo clinking softly as it shifted. My tendons strained, muscle fibers beginning to tear, the vertebrae in my lower back crunching and stabbing, and pain raced up my left arm until I couldn't feel my hand anymore...*fuck*...

And then Cliff was off the plate and the safe was on it, and we had twenty-one seconds left. “Go,” I choked out, and scooped up the blast shield to follow him at a stumbling sprint, my body shaking, my muscles not responding correctly to the neurons firing against them. But that was all right, because all I had to do was run, run, stagger, run—

I was counting down in my head as we rounded into the garage. Eleven—ten—

We pounded across the cement, the open door filling my vision like a mirage, the promise of survival. Eight—seven—six—

We hit the door.

Four—three—

Still in the blast zone, still very much in the blast zone. Two—

I launched myself and tackled the DHS guy, taking us both to the ground and covering with the shield at an angle.

The concussion slammed into us like we'd been hit by a train. Flattening. Deafening. Turning the world inside out. Debris battered the shield, as if the building had been cheated and was reaching out vindictively to bury us.

When it finally all stopped it felt as if my surroundings had gone to mute after the sensory overload. The dust, the debris, the street, the blast shield I still clung to, the man I was hunched over—everything was deadened and dulled.

Someone pulled at us. The other agent. Mouthing words at Cliff.

I rolled away and forced myself up to stand, annoyed it had taken me a moment. The female agent, covered in dust but otherwise unharmed, was

helping her partner to his feet. He almost fell. His hands shook where he clutched at her for support.

I left them to it and loped away.

“Hey!” the woman shouted, the audio muffled like she was calling from very far away, but I didn’t turn. They weren’t going to shoot me in the back. At least I didn’t think so. They did yell after me, but I couldn’t hear what they said, which was just as well.

CHAPTER 12

I TURNED the corner to find a black SUV with police lights still flashing. I'd fucked my car when I'd broken in here, so I stole theirs. Served them right for almost getting me blown up.

I was just ditching the government car in favor of a more anonymous one when my phone buzzed with Arthur's number. "Speak loud," I said. "I found their old base, but they blew..."

Arthur was talking.

From a ways away, and goddamned hard to hear. I turned the volume on the phone all the way up, but the ringing in my ears was still too bad for me to focus past it.

I needed an amplifier. I spotted a coffee cup in the detritus on the floor of the passenger side of my new ride and picked it up. A few rips and a twist and I had something that would bounce my sound waves into constructive interference. I tore a slot in the base and slid it over the phone's speaker, then held the mouth of my makeshift amplifier up to my ear.

"...ain't gonna let you go," came Arthur's voice, quiet and inexorable.

"You're fucked up, man. You're fucked in the head. You really wanna die for this?"

"I ain't walking away."

I dropped the cup and texted as fast as my fingers could move:

Helicopter and Arthur's location

NOW

Checker was prone to asking far too many questions, but he knew an emergency when he saw one. Thirteen seconds later I had the freeway exit for a nearby hospital.

Hospital security is effectively nonexistent. At least when it comes to someone like me. I was lifting away from the roof helipad into a darkening sky before anyone registered I was stealing from them.

By that time, I had another text from Checker with an address and a pair of coordinates. The latter were what I needed—thank God for smart people and their forethought. I steered the helicopter west into the blood-colored sunset, pushing it to its breaking point until it tried to shake itself apart around me. It bucked and fought, but I held it on the edge.

I couldn't hear the murmur of voices from the still-open cell phone call over the roar of the blades, but I kept it on and in my pocket, my side of the conversation muted. The pessimism of the math pressed me to urgency—Arthur was back in the city, and my top speed was only a little less than a hundred and fifty miles per hour. Even though I'd skip traffic and go the crow-flies route, I'd still need almost half an hour to get to the location Checker had sent.

A lot could happen in half an hour. Too much.

The 'copter ride gave me too much time to think. Maybe I should have called the cops, or told Checker to. Get the fucking DHS in there. But no, wouldn't Arthur have dialed them in the first place if he'd wanted police?

Unless he'd only called me because I was the last person who'd texted him. Unless I was the first contact he'd hit when he'd tried to be surreptitious. Unless he'd only called me because it was *convenient*.

The helicopter shuddered beneath me, the blades catching on the pressure differentials and almost sending it into a roll. I manhandled it back on course.

Night crept across the sky as I flew, the city springing into illumination beneath me, a quilt of yellow and white crisscrossed by whizzing red taillights. The location Checker had sent was on the northern reaches of the city. I let the latitude and longitude lines net the globe beneath me, a finer and finer mesh, until I zeroed in on the building: a broad, flat-roofed place with an acre of cars gleaming like beetles in the floodlights behind

it. Right, Arthur had gone to find the SUV. This had to be a vehicle processing center and impound lot.

I dropped the helicopter toward the broad roof of the main building, looking for the best place to land, when the whole roof folded in on itself beneath me in a thunderous collapse.

The helicopter bucked against my hands, fighting the air as the concussion grabbed and buffeted us. For one sick instant I thought it would twist against the blast and dive headfirst into the implosion. I fought the controls, correcting for every variable I could, but I ran head first into Navier-Stokes and in that moment I sincerely thought I was about to die.

But a split second later the numbers collapsed into solvability, and the skids glanced off tumbling cement blocks and flying rubble as I got clear.

I was only twenty feet up, and landing smoothly was out of the question: the best I could do was fall rather than crash. The skids hit the asphalt at an angle, jarring me to the teeth as the machine dropped the rest of itself down and jolted to a stop even as the outside world continued to blow up, the collapse finishing itself with an earth-grinding rumble. The rotors wound down in an ugly *whop whop whop* above me.

Whop. Whop. Whop.

My joints felt locked up. Brittle. I wanted very badly to cough but to cough I would have to breathe, and breathing was going to hurt.

I had to get out—do something—

Arthur.

My left hand was fused to the collective. I pried the fingers apart. It felt like I was peeling the flesh off and leaving my skin stuck there, as if I'd touched a frozen lamppost. I dug my right hand clumsily into my pocket for the phone as I did so.

Arthur's call had ended less than a minute ago.

I half-fell out of the helicopter and onto the blacktop. Dust clogged the air, drifting down to settle across the lot. I coughed. It hurt.

I punched the buttons on my phone to call Arthur back, my hands shaking. It went to voicemail.

My brain was blanking out. I forced it to think. The coordinates Checker had sent me went out to five decimal places. An error of half a

hundred thousandth of a degree of latitude would be less than two feet—which gave me a four-by-four square. Sixteen square feet Arthur could have been standing in.

But Checker had most likely gotten those coordinates from cell phone tracking, and I didn't know how accurate his methods were—even if he found the location to within a few feet, a few more feet of inaccuracy began multiplying the search area into hopelessness. Not to mention the possibility Arthur had moved, or run, or tried to take shelter—

Please let him have taken shelter.

I stumbled toward the remainder of the building, the soles of my boots turning on the debris. I hiked up into the pile of rubble the place had become, trying not to think, the geographic grid overlaying itself for me. There, there was where his cell signal had come from. At least, where it had come from more than half an hour ago.

I closed my eyes against the grit and did the last thing in the world I wanted to: I recalled the structure to my mind as I had seen it from the air and rewound the explosion.

My memory wasn't perfect, but a cascade of calculation had been torrenting through my head as I'd tried to keep the helicopter aloft, and I could remember enough of the numbers to reconstruct how the building had imploded. The placement of the charges highlighted itself in my brain. The way the walls would have fallen in, the way the roof would have collapsed.

Where any air pockets might have formed.

I started digging.

I lost much of the next few minutes. My brain kept skipping. It couldn't have been that long, as the sirens hadn't arrived yet. Long enough for my hands to turn bloody, the skin and fingernails torn. Long enough for me to tear a muscle in my back.

Long enough for me to think it was hopeless. I still didn't stop.

My senses screeched back into alignment when a muffled call strained through the rocks a few yards to the left of where I was digging. I tore toward it, forcing chunks of concrete out of my way with a single-minded mania. A long twist of rebar was in one hand; I couldn't remember picking

it up but I used it as a frenzied lever, heaving through debris that were larger than I was.

“Arthur? Arthur!” My voice was hoarse. How long had I been shouting?

“Russell?”

He’d taken shelter under...something...that was large and metal. I couldn’t tell what it had been from the corner I’d uncovered, but I didn’t care. I dug out the edge, down to the dark triangle underneath, and Arthur’s hand appeared, dust-covered and grasping. I grabbed on and pulled.

He grunted and coughed as he squeezed through, half-collapsing. I grabbed him around the middle and hauled, and we fell together on the rubble.

“Fuck you,” I croaked, when I could manage speech. Breathing hurt. Everything hurt, but I couldn’t feel it. I was too angry. Or something. I wasn’t sure.

“Thanks,” Arthur said.

I was having trouble forming thoughts. “Fuck you,” I said again. “What—the—hell—?”

“They sent someone to destroy the evidence. ‘Parently.” He sniffed and swiped a hand across his face, leaving streaks of dirt and blood. “Seems a bit extreme.”

I wanted to hit him, but that would require moving. “They offered you the opportunity to walk. I heard it.”

He looked away. “Had him at gunpoint. Wasn’t about to let our best lead walk out of there and blow the evidence.”

“And that plan worked so well for you.”

He flinched and said softly, “They got Sonya.”

I pushed myself up, stumbling, my boots sliding in the jagged depths of the rubble. “And you’re willing to blow yourself up for that? You’re willing to drag all the rest of us down with you? Me and Checker and Pilar, we’ll end up buried in buildings or buried by the DHS, and that’s just fine with you, isn’t it?”

I couldn’t see his face in the darkness. “I’m sorry, Russell. I should’ve gone to the authorities in the first place, this was too big—”

It was the worst possible thing he could've said. "Go to the cops, then," I spat. "I hope you and Homeland Security are very happy together."

I left Arthur sitting in the dark and struggled down off the heap of rubble. Fortunately, an impound lot gave me ample choice of a new vehicle.

I expected to hear sirens on my way out, but there was nothing. The processing center was on its own lot, out of line-of-sight of its nearest neighbors—maybe people had thought the implosion had been an earthquake.

The cops would get here eventually, though. Arthur could go to hell and join them.

CHAPTER 13

I CALLED Checker as I was jacking another car, once my hearing had mostly returned. “How’s the plan going?” I asked. We didn’t need the Feds. I’d show Arthur. I’d *show* him.

“In place—I think—”

“Why are you whispering?”

“Because my worst nightmare has come to pass. The apocalypse. The end times—”

“Checker!”

“There are NSA agents in my house.”

Okay, for once I wasn’t going to accuse him of exaggeration. “Shit, what do they want? Do you need me to come over there and—”

“What? No! I mean, I don’t *think* so. I’m not under arrest or—or—whatever else they do to overzealous white hat dudes who are creative enough to step out of the narrowly confined boxes proscribed by our myopic legal system. They don’t even seem terribly interested in what I do, only what I know about Professor Sonya’s case, and trust me, I am not disabusing them of the notion that I am a small fry beneath their notice.” He paused unhappily, and the hyperbole went out of his voice. “I just...I just don’t like them in my house.”

I got that.

“What’s going on with Arthur?” Checker asked. “Is he okay? I didn’t want to call in case you—”

“He’s fine. He had a building fall on him.”

A full six seconds passed before Checker sputtered, “He *what?* Is he okay?”

“Are you having trouble hearing me? I said he’s fine.”

Checker didn’t answer.

“Don’t you dare feel bad for him. He did it to himself.” *He should’ve stuck with me.* “Besides, he got underneath something. He’s fine.”

“He got under...”

“Someone in this mess really likes playing with explosives. They almost blew me up, too.”

“They almost...” He trailed off. “I, uh, I gotta talk to Arthur.”

It wasn’t that I’d *expected* him to ask if I was okay, really. It was just—he usually would have. “Arthur’s running to the authorities,” I said bitterly. “The NSA, or Homeland Security, or whoever’s running this shit show. If you want in on that, knock yourself out.”

“I think it’s a joint operation,” he said distractedly. “The NSA doesn’t have field agents. I—uh—Cas—”

“Well, the DHS or whoever else, I’m going to beat them. Have you planted the evidence for the Lancer yet?”

“Yes—mostly. Listen, I—I don’t know how to—”

“I got out in time.”

“What? Oh, uh, yeah. Good. Cas, remember when I said that thing about personal worst nightmares and end times? I just—this is—”

I wasn’t interested. “Set it up so the Lancer thinks I’m taking a meeting and thinks he can track me down, somewhere with no bystanders to get in the way. Text me the location.”

“I—okay.”

He sounded so dispirited. I sighed. “We’ll kick this case in the balls and get the professor back. You’ll see.” Arthur would see.

“That’s not what I—okay. Okay. I’ll set it up.”

I hung up.

I dropped the phone on the passenger seat of the car I was jacking and leaned my head against the steering wheel, my hands in my lap. The

bandage had come off my left one at some point. It didn't look worse than the other, though; both hands were caked in blood and dirt.

I should drive to one of my bolt holes and patch myself up. And sleep. Sleep until Checker texted me with a location, one where, hopefully, the Lancer's crew would swoop in to trap me and take me to Sonya Halliday.

It took me four tries to start the car. My grip was too clumsy on the wires.



A TALL Asian man loomed above me. Rio.

"You have no choice," he said. "Nor did he."

"There's always a choice," someone answered. The words echoed through my chest and head as if I were the one who was saying them. "He chose to kill me rather than to let me die."

Rio closed the distance between us with one step, suddenly menacing, and reached for me. His palm clamped over my nose and mouth—I wanted to struggle, to save myself, but if Rio wanted to kill me then I should die, right?

Right?

Animal panic took over and I fought, beating against the iron bar that was his arm, but I'd waited too long, and my movements were weak, feeble, the cells in my brain shutting down one by one, blinking out like the lights of a dying city—hypoxia and cell death—and from very far away I heard someone else say, "It's the only option."

I jerked awake. I was on a thin mattress in the shithole apartment I'd driven to, dirty and bloodied bandages scattered on the floor from redressing my accumulating injuries. My hand, back, and ribs had started to throb, but I could tell that wasn't what had woken me.

Sleep had never been particularly restful for me, but in the last two years the nightmares had become worse and worse. More detailed and more crippling. When I wasn't on the job, I couldn't hope to stay asleep for more than half an hour before I woke, tangled and sweating and hyperventilating. Getting blackout drunk was the only thing that helped.

And now I was having trouble while working. Work had always focused me, kept me sane, but now...

I wasn't stupid; I knew why it was happening. Two years ago was when we'd gone up against Pithica, when a psychic had rooted through my brain like it was her own personal rummage sale. I didn't think she had taken any particular care not to break anything.

It was what it was. Just something I had to deal with now, I supposed.

I checked my phone, but I'd barely managed to stay sacked out for ninety minutes and Checker hadn't texted yet. I thought about going to pick up some more armaments, but seeing as how I was trying my best to get captured, I probably didn't even want to bring my Colt, since they'd just end up taking it.

I got up and did a more thorough job of cleaning and rewrapping my open wounds. None of them were very serious on their own, even the burn; it was the cumulative effect that was becoming troublesome. I bandaged both the hand and the graze on my shoulder, which I'd mostly forgotten about—it wasn't that painful, and more importantly didn't impede my movement. The bruised ribs and torn muscles were harder to ignore.

At least my head and lungs felt better than they had yesterday. That was good. Small favors. I chewed a few protein bars that tasted like sand and waited for Checker to get in touch.

He took a lot longer than I expected. It was five in the morning before he texted me an address with a nine o'clock meeting time and a short message: *CANT SAY 4SURE THEYLL SHOW*. He'd also included fake names for me and for my would-be business contact—Checker was nothing if not thorough. An instant later, I got another set of texts detailing anything the Lancer might know about me from the false trail—it wasn't much; Checker had kept specifics to a minimum—and a final message that added, *MIGHT GO RADIO SILENT IF NSA ARND. ARTHUR TEAMING W/ THEM NOW*.

Yeah. Of course he was. My mood soured, and I felt the sudden need to get out of my apartment, even though the setup was still four hours away.

The imaginary business meeting Checker had leaked turned out to be at an abandoned diner in the mountains. It wasn't a spot I would've chosen—too many places to hide, too easy for someone to set up an ambush. Although I supposed them ambushing me was the whole point.

I turned sharply off a winding canyon road and down an overgrown driveway to reach the dilapidated had-been restaurant. The place looked like it had overreached in its day, with tiered landscaping inset into the slope and several separate buildings with outdoor stairs between them around defunct patios. Less of a diner and more of a kitschy yuppie eatery. No wonder it had gone out of business.

I climbed up to the main building. I didn't even have to bust in; the door was unlocked. Inside, sunlight filtered through dusty windows to illuminate a long counter and bolted-down diner stools that had once been red. Presumably there had also once been tables, but they'd either been taken by the old owners or looted. I was betting on the latter, considering the odd bits of graffiti around and the used drug paraphernalia someone had left in plain sight on the countertop. I spotted a discarded condom in a corner as well. Lovely.

I sat on one of the grimy stools and leaned back against the counter, waiting.

The hours crawled by. I wondered if this was pointless. How did we even know the Lancer was still checking into Sonya Halliday, that he would see the clues Checker had left? What if Checker had been too subtle—or too obvious? What if the Lancer was good enough to figure out who I *actually* was, to see through Checker's charade of an itinerant math genius collaborating with a university professor, and had ordered his men to put a bullet in me instead of bringing me in?

It had all seemed like such a good idea at the time.

I forced myself to calm the twitchiness, reminding myself that if this was to have any chance of working, I needed to look unsuspecting, to appear someone who could easily be captured. As nine o'clock rolled nearer, I forced myself to concentrate on the countertop instead of investigating every little noise outside. The faded pink laminate had an overlapping pattern of light white squiggles texturing it—I graphed the squiggles parametrically and then translated to rectangular coordinates just for kicks.

The swinging door to the kitchen banged open. Several large men with AKs crowded into the diner, apparently having come in through the back.

I had started to move before I tamped down the reflexes, and just ended up jerking off the stool. God bless Checker. It had worked. "Hi," I

said, absurdly. What did a person say when a bunch of guys with guns appeared and it *wasn't* exactly what she'd been hoping would happen? "Who are you?"

"Come with us," said one of the goons.

I wondered if I should put up an appearance of fear. Probably, though I wasn't very good at such things. "Okay," I said, trying to look subdued, and started forward.

A megaphone squawked outside. We all stopped. The guns in the bad guys' hands twitched upward—

"Federal agents," came an echoing voice. *"We have you surrounded. Put your weapons down and come outside with your hands in the air."*

Oh, *fuck*.

I didn't know if the DHS had tracked me or if they'd been following the bad guys, but reflexes kicked in—when a meet's blown, make sure everyone knows you're not the one who blew it, or you might not live to be arrested. "Fucking Straczynski sold me out!" I yelled righteously before I could think about it, using the fake name of my business contact. One of the goons grabbed me by my jacket collar and I let him wrestle me into their midst.

And then a shout came from in front of the diner—something about freedom—and someone started firing. Several someones. The acoustic calculations resolved themselves instantly—people shooting away from the diner, bad guys firing at the Feds. A split second later, the Feds started firing back, and just like that, I was in the middle of a shootout.

The priority of staying alive swept everything else out of my head—the blown meet, the bad guys, Sonya Halliday. I had to get out of here. I tried to listen, but there were too many Feds, too many angles—the math couldn't map a safe path for me. As if to prove it, a bullet tore through the wall and tagged the guy next to me in the gut. He yelled and staggered, and one of his friends helped him down and pushed hard on the wound.

The rest of them rushed to defensive positions by the windows, where they could peer out and presumably help their colleagues outside. I hunkered down by the counter, making myself as small a target as possible. What the math *could* tell me was an estimate of how many Feds were out there, and the answer was: too damn many. The men in here might not know it, but they were dead.

And I was going to be dead with them if I didn't do something.

I glanced at the guys at the windows—they were all facing away—and then whipped my hand forward to slam the would-be medic's head against the corner of the counter. He slumped on top of his gut-shot friend. The friend didn't twitch, already unconscious from blood loss.

I stole a nice little bullpup AK off the guy I'd just killed and helped myself to whatever spare magazines I could grab easily from their pockets. Then, keeping my head down, I scooted for the swinging door of the kitchen like the hounds of hell were after me.

The crumbling kitchen had a back hallway that probably led outside, but I was one hundred percent sure the Feds had people covering that exit. Instead, I turned to the side and peeked out a window to confirm what I thought I'd remembered: the wooden decking that used to be outdoor seating abutted this building and led in meandering verandas and stairs up to the next one.

I opened the rotting cabinets against the wall, checked that the AK was on full auto—it was, *idiots*—and fired.

The magazine emptied itself in less than three seconds. I reloaded and repeated. In short order, I'd perforated myself a very nice little hole in the base of the wall.

I kicked out the remaining plaster and wood and then ducked down and jammed my head through. The firefight muffled itself momentarily as I pushed through the dense screen of plant growth that had crept to life in the crack of sunlight against the wall before I burst through under the decking. It was cool under there, dark and musty-smelling with narrow white slats of light striping the dirt. I wormed the rest of my body out and through, dragging the AK with me just in case.

There was still a chance I'd be hit by a stray bullet under here, but much less, considering the Feds would be concentrating on the main building. The space wasn't tall enough for me to crawl, but I managed a reasonably fast belly-and-elbows squirm.

I reached the far end of the first patio and wriggled my way over to the stairs. Unfortunately, they'd been built over a rocky bit, and I peered upward in the dimness—nope, I wouldn't be able to fit underneath.

Which gave me two choices: risk breaking cover, or hunker here and hope that when the DHS took the building they wouldn't find my escape

hole. Well, there was next to no chance of *that* happening. If I didn't want to be taken by the Feds, I had to clear out entirely.

The thrum of a helicopter rose on the edge of my hearing, mixed with the deafening staccato of the gunfire. Better to go now than after the bird was above me. Fortunately, the place had become so overgrown that I'd be camouflaged by untamed bushes and stunted half-grown trees in my dash up to the next patio.

I pulled myself to the edge of the deck and out into the shrubbery, pushing off into a hunched run up the five strides to my next cover. I was two steps in when the building behind me blew up.

A cascade of reactions flew through my thoughts before the blast had completed itself, starting with *What the hell* and *How many explosives do these people carry anyway* and *Sounds like that went wrong for them* and diving immediately into *Who gives a shit, it's a perfect distraction, keep moving keep moving*—

And then my knees hit the rocks and my face bounced off the branches and twigs and I couldn't move.

Pain blossomed in my left side, answering the question I hadn't gathered my wits to ask yet. Something—a bit of debris, a chunk of shrapnel, *something* sharp and jagged and ugly—had driven itself into me, something slingshotted by the blast, some woefully unlucky projectile that hadn't even been aimed at me.

Oh Jesus *fuck* that hurt.

Whatever it was had ripped through just below my left kidney, and was still in there, a massive rod of fire piercing my abdomen, tearing all the way through to the front and then lodging itself. I tried to move, and my muscles twitched unresponsively. Breathing was shallow and a colossal effort, as if my insides had been scrambled so much that I no longer had any room for air.

I had to be bleeding a lot. I tried to push myself onto my elbows. The brush underneath me was sticky and red.

Shouts and movement echoed from the woods around the diner.

The stairs I was next to led to a walkway that wound around the next building to open into another veranda. If I could get to the building, maybe

I could take cover somewhere inside. Find something to patch myself up. Maybe.

I pawed at the plants and the ground and managed to lurch into a crawl. By the time I made it up onto the walkway to the door, my vision was darkening around the edges, and my side was a ball of fire. I reached up and pushed the door open, vaguely noting the scarlet smears and handprints I was leaving behind.

I slumped against the wall just inside the door and concentrated on breathing. My right hand had dug in to press against the front side of the wound, and it felt like it was drowning in blood.

I reached my left hand up and found the edge of a table—this building still had them, dusty and defunct—and heaved. The world tilted and the floor almost went out from under me, but somehow I got myself upright, standing—okay, leaning heavily—against the wall.

Getting captured by the DHS was not an option. Checker had broken me out of local police custody before, but I wasn't going to bet on his skills when up against national security resources. Not to mention that I wasn't convinced this level of federal agency would feel inclined to let me go even if Checker hacked enough files to make it seem like I was the Pope.

And if the DHS connected me with any of my other not-at-all-legal activities, or, worse, if the NSA found out about my math abilities...

They wouldn't just throw me in a hole. They'd throw me in a lab.

I still had a small but finite opportunity for escape. The back of this building was up against the wooded slope of the mountain. The Feds had to be moving in their perimeter now, concentrating on whatever had happened in the exploded building. If I went out a back window, I had a chance of being able to scale the slope while they were distracted and slip their net without being seen, or fight my way through surprised agents. A slim chance, but a chance.

I pushed off the wall and limped toward the back of what had been this building's eating area. My legs almost buckled, but I forced them to support me.

I got to the back wall—well, lurched against it. I fumbled with the latch on one of the windows with my left hand, but the thing was rusted shut and my fingers were slick with blood. I'd lost the AK at some point,

but I pulled out my knife and bashed the hilt against the pane. Large shards cascaded down. I started using the blade to break off any jagged bits remaining in the bottom of the frame; I had no desire to be cut up more than I already was.

“Hands in the air,” said a quiet voice behind me.

I turned slightly.

The *same fucking DHS agent* from before stood across the room, her tall silhouette backlit in the door. Aiming a gun at me. *Again.*

“I thought it was you,” she said evenly. “Hands in the air. You’re coming in this time.”

Still, she was only *one* DHS agent. And she had a gun aimed at me, but all I needed was a split-second distraction...

Under normal circumstances, the mathematics reminded me.

That was the bad thing about mathematics: it wasn’t going to be swayed by what I wanted reality to be. Usually it told me how I could win, but this time...this time the escape avenues shriveled and curdled away, stricken down by disinterested logic. My weakened state shortened the possibilities, made it so every move I could make, the agent could counter.

She might make a mistake—but then again, she might not. And even if I got past her, there were still all her friends out there. If anyone spotted me running, I was liable to get shot, and even if I knew I was being targeted, right now I probably had no better than a forty percent chance of being able to avoid it.

Mathematical expectation—the probability of being shot by her or one of her colleagues if I tried to get past her, multiplied by the truly awful outcome of dying...

The answer didn’t even have the grace to be close. Fucking math.

I raised my free hand in the air, the one that wasn’t stopping me from bleeding out, and let the knife tumble to the floor. I meant to say I surrendered, but the words stuck in my throat.

“Face down on the ground,” said the woman, taking a step forward. “Hands on your head.”

I didn’t want to do what she said—I wanted to give her a snappy comeback instead. But the ground came up to meet me anyway. Maybe it

was the adrenaline flooding out of me. I crumpled to my knees, then to the grimy diner floor.

I'd lost hold of my injury in the front. I felt an awful sort of pressure release along with a paralyzing jolt of pain. I tried to evaluate the injury the way I always did, but for some reason I didn't feel capable.

Something like fear bit at the edges of my thoughts. My hands didn't seem to be working very well, but I managed to touch the back of my head. "Hurry," I mumbled against the dusty tile.

I could hear the woman—the DHS agent—approaching slowly. Probably waiting for backup.

"I'm bleeding," I mustered the energy to say. I meant to say it loudly, but I was lucky the syllables came out at all. "A lot. In fact...I think I'm going to pass out in about twenty seconds." My self-evaluation wasn't telling me much at the moment, but the math of the blood loss wavered through the mess. One final vestige of intelligent self-preservation prompted me to add: "Don't let me die; I have the proof you want."

She hesitated, and then I heard her calling for paramedics on her radio.

"Ten," I said woozily. "Nine..."

Her footsteps hurried toward me. "No sudden moves."

"I don't think you need to worry about that," I said, and passed out.

CHAPTER 14

I WOKE up in a hospital room, handcuffed to the bed rail. I was a little muzzy-headed, but the numbers sang to me about how easy it would be to break my thumb and slip the cuffs.

My brain caught up: I must be feeling better. I did a quick internal survey—my left side was still torn up, but someone had put everything back in the right places and sewn it all together, and it would heal up nicely if I didn't strain it. My various other cuts and scrapes had also been cleaned and bandaged.

It had been nice of the DHS to patch me up, but I had to get out of here. I slitted my eyes open and flicked my gaze around the room. White and bright and a tall figure standing by the door in an approximation of parade rest.

"Welcome back to the world," said the DHS agent who had taken me in. She wasn't smiling.

I blinked my eyes all the way open, giving up any pretense at still being out. "Hi."

"Who are you?" the woman asked.

"Me? I'm nobody," I said, testing my right hand against the cuff. "I'm just a middleman."

"For Sonya Halliday."

"Maybe. What do you want with her?"

She snorted. I guess she was right: their interest was obvious.

“DHS,” I said, feeling things out. I couldn’t remember exactly how the various Homeland Security branches fell out, but... “Secret Service?” They were responsible for financial crimes and protecting the U.S. economy, from what I could remember.

The agent didn’t answer. “You said you had the proof. I think you were lying. You’re trying to track it down the same way we are.”

I didn’t have to answer—I could stay quiet. Of course, if I did, they’d probably assume I was after the proof for nefarious world-destroying purposes. “I’m not after the proof. I’m trying to save the professor.”

“Of course you are.” The sentence was heavy with irony. “You’ve been meeting with her for months. Were you working to find a buyer for her work? Did the buy go wrong?”

I was jarred for a minute. *Months?* Holy crap, they must have found the trail Checker had set for the Lancer.

Should I set her straight? Was there any way to turn this to my advantage?

“I’m not trying to help her sell the proof,” I said, dragging out the words. Stalling.

“Then what? People like you don’t visit with math professors for no reason. What were you discussing?”

Checker had—hopefully—made the Lancer think we were in fact discussing mathematics, but if the government didn’t know that part I wasn’t about to tell them. They’d lock me away forever, if they knew. *Black doors, silver needles, red tile, white coats—*

“She wanted protection,” I blurted. “A bodyguard. I kept telling her she didn’t need one. I was wrong—obviously. Finding her is a matter of professional pride.” I bit my lip to stop the stream of words. I talk too much when I’m lying.

The agent studied me.

“Am I under arrest?” I asked finally.

“Maybe. That depends.”

“Depends on what?”

She appeared to be considering her next statement carefully. “You are aware we are under a serious national security threat if the proof is not contained before we can adapt our systems.”

“I’m aware,” I said.

“To that end, we’re not opposed to utilizing whatever assets might come our way. And you have proven to be remarkably efficient at tracking this group.”

I tried to tease through her meaning. My head was still muzzy, but she couldn’t be saying what I thought she was saying. “What?”

“Assuming you’ll cooperate fully, and that your identity and your story check out, we’d like to use you.”

“You want to *hire* me?”

Her lips thinned. “I didn’t say hire. I said use.”

The skin on the back of my neck crawled. “You’re not the Secret Service, are you.”

Some very unofficial branch of the Department of Homeland Security, one empowered to make whatever decisions necessary to protect the country...one to whom the petty crimes of a mercenary retrieval expert were insignificant as long as they could harness her as a bloodhound, unbound by the niceties of due process and lawyers...it all seemed so at odds with the bright white room and the woman’s crisp civilian clothes and short stylish haircut.

“You’re not just going to let me walk out of here,” I said.

“No.”

A trickle of panic joined the skin-crawling. “Fuck you,” I said. “You want me to be some demented version of a CI, put your cards on the table *right the fuck now*.”

Her expression didn’t change, but I had the distinct impression my response was precisely what she’d manipulated me into saying, and I didn’t like it. “We’ll be tracking you,” she answered me calmly.

“You’ll *what*?”

“The tracker has already been implanted. Deliver us Professor Halliday and her proof, along with some assurance you’ve contained the information, and we’ll tell you how to disable it. Or how to have a surgeon remove it, if you prefer.”

I lunged and wrenched my hand; my thumb *cracked* audibly as it went—my hand scraped out of the cuff with a burst of pain and I dove to the

side, off the bed. An IV stand stood next to me; in one fluid motion I wrapped my other hand around it and spun, slinging it at the agent.

She fended it off, faster than I expected, and reached for her holster at the same time, but I used the precious split second to vault past the foot of the bed and slam into her, jamming up her gun hand. I twisted as I hit and took us both to the floor. My hand followed in the same motion to grab her sidearm out of her holster myself.

I rolled away and came up gun first. The agent snapped to a standstill in the midst of lunging after me.

“Better,” I said.

“You don’t want to do this.” She wasn’t even breathing hard.

The wound in my side spasmed. “Give me the tracker info. Now.”

“I’m not in possession of that information,” she said. “And if you try to take me hostage, the result will be your arrest or your death. Work with us instead.”

“Work *with* you? Under threat? I don’t think so.”

“You think this is a threat?” She laughed. The sound was ugly. “It’s a gift. The only reason five agents aren’t bursting through the door right now is my supervisors’ decision to have me keep this unofficial. Do I need to spell this out for you?”

Secret police, people in white coats—

Except this *wasn’t* a secret base or a laboratory. It was a hospital room, with an unbarred window and a TV bolted to the wall above us.

“You’re short on time,” I said.

Her expression flickered.

“You airlifted me to the nearest hospital, and you didn’t even take me somewhere secure afterward, because why risk exposing a base of operations to someone who’s just going to walk out anyway?” I squinted. “Do you even care if I escape, instead of just being fooled into thinking I’m getting the best of your little deal?”

“It’s not a trick,” she said. “I’ve been straightforward with you.”

“So that I knew I couldn’t run off and sell the proof after finding Halliday. So I would know you had a leash on me.”

She didn’t blink.

“Get out of my way,” I said. “Or so help me, I will shoot you.”

She straightened and moved aside.

My clothes were on a chair next to the door. I scooped them up with the hand that wasn't holding the gun—my broken thumb twinged. Then, with a sick feeling I was doing exactly what they wanted me to, I edged out of the room, keeping the agent's own gun on her the whole time.

She didn't try to stop me. After all, she had won.

CHAPTER 15

I STAGGERED out of the building—a regular hospital—into the bright sunlight. There'd been no other security; I'd changed in a stairwell and walked out the door. The DHS had been kind enough to leave the contents of my pockets untouched, though my shirt was missing. Probably a surgeon had cut it off. I'd zipped up my jacket instead—it would look funny in the Southern California warmth, but that was the least of my concerns right now.

My side throbbed like the tracker was releasing a toxic poison into my bloodstream, taking me over, making me theirs.

Where to go?

Did it matter?

Away. I had to get away. That was the first priority. Get some distance.

I stole the first car I came to, wondering if the DHS would bust me for it. Like that would make a difference now. I drove fast, faster than I should have, tearing out into the desert, out past the outskirts of LA to where civilization drained down to gas stations and dust. Then I pulled the car off the road, into the empty nothing, and stopped.

The sun beat down through the windshield, baking me. The wound in my side ached horribly. I'd popped my broken thumb back into place on my way out of the hospital, but it still sent spasms up my right arm, and the burn on my left hand had started to prickle again under the bandage they'd dressed it with.

I ignored the pain and dug into my pockets. I'd dropped my main knife in the diner when they'd taken me, but I'd had a pocket multitool on me that had a blade on it. I pulled it out and opened it.

I leaned back and squeezed my eyes shut. I had to be able to do this.

The hyperawareness of my body that let me put whip-fast mathematical calculation into practice also told me when I was injured, where, and how badly. The layers of muscle and skin and flesh sang to me in numerical exactness. How small was a microchip? I had to be able to feel it, right?

Had to...

For a few long, long moments, all I could sense at the wound site was an aching, burning pain. I pushed it aside impatiently, probing for anything out of place. Stitches. The jagged ends of a tear that hadn't closed yet.

And there. A small dot of foreign matter. Something that didn't belong.

That was it. That must be it. I gripped the pen knife in my left hand, clenched my teeth, and pulled up my jacket.

By the time I'd dug out the microchip, a bit of a thing the size of a grain of rice that slid slickly from my bloody fingers to the hard-packed dirt, the driver's side of the car was wet with blood and my wound had reopened to ooze down my side. It wasn't dangerous—not yet; not until infection set in—I knew enough mathematics of anatomy to have made sure of that.

And the microchip was out. That was the important part.

I took a breath, feeling suddenly much cleaner.

Would the DHS—or the NSA, or whoever—be able to tell I'd removed it? Would they be after me?

More importantly, what if they had put another chip somewhere? Slid it in with a needle between my toes, or folded it into the stitches where I wouldn't be able to tell one bit of foreign matter from the next? Could I search my whole body this way? Tear myself apart?

The feeling of cleanness dissolved away.

I tried to extend my senses, to feel through the rest of my body, but I wasn't sure. They could still be tracking me.

Or maybe I *had* beaten them. If I had, they might be able to tell I'd sliced their spying eyes out of myself. I had to leave the chip behind and

get out of here. Fast. I gunned the engine and drove until I found a gas station, then switched cars and repeated that seven times.

There was nothing more I could do.

I'd ditched my cell phone in the middle of nowhere along with the microchip, so I angled back toward LA and sped through the desert until I found a grungy strip mall with an electronics store. I bought a prepaid cell phone and dialed Arthur.

No answer.

Shit.

I dialed Checker.

"Hello?" said Pilar's voice.

I was too confused to answer for a second. "This is Checker's phone," I said stupidly.

"Cas!" Pilar effused. "How did it go? Did you get away? Where are you? Did you find the professor?"

"No," I said. "Where's Checker?"

"I fed him an Ambien and forced him to get some sleep. I told him I'd wake him up if there were any developments. Are there? Developments?"

"I thought you were with the NSA," I said. "What happened?"

"Well, I was, but there wasn't all that much for me to do once Arthur turned himself in."

"Turned himself in? Is Arthur under arrest?"

"What? No! Uh, I don't think so. Why would he be?"

I supposed it was *possible* for Arthur to spin things as if he hadn't broken any laws.

Especially once he'd split from me. I was mad at him all over again.

Pilar kept chattering. "But anyway, Checker called me for help, I think he was having some sort of PTSD trouble what with the building falling on Arthur, so—"

"What?"

"Well, I don't know if that's what it is, really, but one of my cousins was in the Marines and—"

"Pilar!"

“Apparently it’s not the first time Checker and Arthur have tangled with someone who likes to blow up buildings,” she said. “Checker’s been on it, trying to see if it’s the same person. They say it’s not a very common MO.”

It wasn’t. “Did he find anything?”

“Um, I don’t think so. Not yet.”

Which meant they were at a dead end, and I was at a dead end, too—I could tell Checker to leak another meet, but with the Feds watching they’d be sure to pick up on it and come fuck everything up just like they had the first time.

Had the DHS found my trap at the diner because they were already tracking me, or had they followed a bead on the men working with the Lancer? My skin crawled like it felt the presence of a thousand unseen pursuers. Why the hell had we brought in the government in the first place? Goddamn Arthur.

“Anyway, Cas, what do you need? Should I wake up Checker?”

I closed my eyes. I needed to know he’d been keeping me scrubbed. That there was nothing for the NSA to find other than the clues Checker had planted to set our trap, that he’d been keeping me too well-hidden for the DHS to have found out everything about me with a few clicks of a button...that there was no way the Feds could track me down and collar me again.

I had no metric for how powerful they were, not really. How could I? Come to that, Checker might not have any better idea than I did. He could give me all the assurances in the world, but I wouldn’t know the truth until they either tracked me down or didn’t.

I was so *tired*.

“Cas?”

My side ached. My jacket was starting to stain in an expanding wet red spot that glistened against the dirt and dried blood already on it. I needed to take care of that.

“Cas? Are you there?”

“Just tell him to call me,” I said, and hung up.

I was still parked in the strip mall where I’d bought the phone. I surveyed the other stores—half of them were shut up. That’s right, it was

the weekend, wasn't it? Sunday, probably, depending on how long I'd been under at the hospital. I scanned the signs, hoping for a laundromat or a dry cleaner's.

No such luck. Restaurant, pizza place, restaurant, bank, video store, empty storefront, karate dojo, nail salon, the electronics store I'd bought the phone at, and three more food places. If I wanted a sub, smoothie, or frozen yogurt, I was set, but a vague nausea floated through me at the thought of eating. Probably I had been pumped full of some sort of anesthetic at the hospital.

The karate dojo had several branded shirts and uniforms on display in its darkened window. I drove around to the back of the strip and broke in, but I didn't even have to risk going up front—the back room had boxes of school-affiliated clothes, some with fanciful calligraphic characters added and some without, and a bin labeled “lost and found” that was overflowing with clothes and shoes. A cabinet also had a rudimentary medical kit. Perfect.

I spread out on a stack of mats in the back room and pasted my side back together as well as I could, liberally squeezing a handful of the single-serving packets of antibacterial ointment onto the jagged site before mashing a compress dressing on top of it. I also taped the broken right thumb against the rest of my hand. It had started to swell in a tender, puffy bulge around the joint, and was turning a lovely purplish shade, but there wasn't anything else I could do for it. I rolled up my bloody jacket to take with me and throw in a dumpster and eased on a large T-shirt emblazoned with “Five Spirit Valley Karate” in both English and presumably Japanese, then dug in the lost and found for another jacket. Not that it wasn't warm enough to go without one, but I liked being able to hide my guns.

By the time I found a baggy sweatshirt I was short of breath. I sat back down on the mats and leaned back, pressing a hand against my side on top of the bandage. The pain was tolerable, but all of my energy seemed to have bled out on the floor of the abandoned diner. *Fuck.*

I hated being weak.

It didn't really matter right now, though, did it? I was out of it all. I could leave finding Halliday and saving the global economy to the NSA and Homeland Security. They'd find her and fix things, or they wouldn't, but either way, someone else was on this case. It didn't have to be me.

I could dig myself in somewhere and try to sleep and take spectacular amounts of narcotics until I healed.

I felt Arthur's hand on my elbow in the bar again, heard the tension in his voice as he asked for help.

That was before he went to the authorities. He doesn't want you in on this anymore.

What if I stepped off the case and Halliday died?

What if I stepped off the case and the DHS found Halliday and then buried her and Arthur and Checker and Pilar so deep no one ever saw them again?

I wiped off the sweat dampening my forehead with another Five Spirit Valley Karate T-shirt.

But what could I do anyway? Unless Checker came up with another approach, I'd run out of leads to chase down.

Everything had been taken out of my hands. I had no responsibility here. *Face it, you're only clinging to this job because you want something to cling to.*

It was probably true.

That was it, then. I was done.

Fuck that noise, said something deep in the back of my brain. *You're not done. Arthur asked for your help—stop whining and help.*

I winced.

I'd go back to Checker's. Whatever he was working on to track the explosives expert or the Lancer, I could probably be valuable. I could even grit my teeth and tolerate it if Pilar took the intel to the NSA afterward—the important part was that someone would find Halliday. Or maybe we'd discover enough for me to go out after her again myself, once I'd regained a little energy. That would be a far more preferable course of events.

It was better for me to have something to focus on, anyway.

I pushed myself up off the pile of mats, using a set of metal shelves for support. After a clumsy and crude cleanup job, I limped to the back door and shouldered it open.

A handgun appeared in my face.

"Well, well," said a man's voice. "We've been looking for you."

CHAPTER 16

MY REFLEXES were a hair slower than normal, fortunately, because it took that split second for me to stop myself from twisting the gun out of the guy's hand and flipping it back on him. I turned my aborted reaction into a slight stumble. It was frighteningly easy to play weak.

"A mistake, going anywhere the big eyes can see you," said the man who had me at gunpoint. He was a large, swarthy fellow, who seemed to take far too much delight in gesturing upward with a gleeful smile.

Right. Shit. The strip mall had security cameras. And from the sound of it, the Lancer was almost as good as Checker. He'd been searching for my face since we'd planted the false trail. Come to that, I was lucky the NSA wasn't doing the same. Unless they were on their way, too...

The man with the handgun had five friends with him, none of whom had weapons out at the moment, but their hands were hidden in jackets and sweatshirt pockets and they were all undoubtedly armed. A more discreet kidnapping team, like at Halliday's apartment—no AKs where people might see.

I pressed a hand to the dressing on my side. I'd wanted to get captured, but this was not the best timing of events. "Are you the ones who have Professor Halliday?" I said, trying to sound scared.

"You're coming with us," the man with the gun said. "We have a job for you."

I flicked my gaze across his burly friends. "Yeah, okay."

To be perfectly honest, I was kind of glad it was part of the plan for me not to fight right now. Of course, this whole scheme depended on me being able to fight our way out once I found Halliday—

One of the other men prodded me from behind and I almost fell. I hadn't realized he'd come that close. Shit.

Well, at least I wasn't having any trouble pretending to be a helpless street mathematician.

They took the gun I'd stolen from my friendly neighborhood DHS agent, along with the burner cell and everything else in my pockets. I followed them into another van—they must've had a freaking fleet of vans and SUVs, for Christ's sake—and one of them handcuffed me to the door.

A man sat in the back of the van, out of sight of the security cameras. He was a middle-aged, long-faced, lantern-jawed fellow with bronze skin and greasy brown hair that surrounded a bald spot and then fell to his shoulders. He had a set of those meditation balls you can get in Chinatown going round and round in one hand, *clack, clack, clack*, and an intricately carved walking stick by his other knee. A tablet computer was balanced on his lap.

"What happened to you?" he said, his gaze on the bloody jacket I still held in one hand. His eyes were intense. Piercing.

I figured it could only help my case to tell a small version of the truth. "It seems like there are a lot of people after me," I answered.

"Have you guessed why?"

"Because I helped Halliday with her proof." I swallowed. "In case you're wondering, it wasn't worth it."

One of the men snickered. They'd all piled in with us; one slid the door shut and with a slight lurch the van started moving.

Clack, clack, clack, went the meditation balls.

"Are you the Lancer?" I asked. Or maybe his boss...

The meditation balls stopped. The piercing gaze leveled itself at me.

Oh, Jesus. How would I have known that name? "The NSA mentioned—they tried to grab me. They thought I was working for you," I invented rapidly.

The eyes stayed on me a moment longer, evaluating, and then the meditation balls started up again.

I let out a slow breath.

“I have many names,” the man allowed with a sneer. “The United States National Security Agency and their stupid games. They think they have so much knowledge.” He said something to one of his men in a different language, and they laughed.

“Yeah,” I said, too relieved to keep my mouth shut like a proper kidnap victim. “Stupid. They tried to offer me a deal.”

“And you refused? That seems unlikely.” The Lancer evaluated me like a bird of prey considering the rodent that will be its next meal.

“They weren’t offering enough,” I said recklessly. I probably should’ve thought through how I wanted to play this.

The Lancer raised bushy eyebrows. “I see.” *Clack, clack, clack.* “How do you like this offer: you help us, we won’t kill you.”

Like I believed that. He’d want to make sure he was the only one with the proof. Killing Halliday and me once we helped him understand and apply it would be a no-brainer.

It was on my tongue to agree—to play along, let him think he had me—when I remembered how another woman had bluffed when we’d been up against a villain with a supervolcano. She’d pushed him, not given in too easily, and it had made him buy our act. “Not good enough,” I said. “Pay me.”

“What did you say?”

“Halliday paid me to help. I don’t do this for my health, you know. I do it for the money.” The proclamation almost sounded true, probably because this sort of story was right in my comfort zone.

The Lancer settled back, looking satisfied. Probably because he *did* plan to kill me, so could get all his money back. “How much?”

Jesus, now I had to think. “You’re going to use this proof to make millions,” I said. “Billions, if you do it right. Aren’t you?” What was the value of such a thing? What would I demand, if this were a normal job?

“*If* your work pans out,” he said. “It may be too slow to be practical, even in polynomial time.”

Polynomial time? This man knew at least something of what he was asking, if not enough to understand the proof himself without Halliday and

me. I thought of the binders full of math papers. "It's not too slow," I said aloud.

"Then what do you want?"

Hmm. If I were really doing this job...he didn't have the money the proof would be worth *yet*; he'd only get it after I worked for him. "I want in."

He tilted his head, studying me again. I'd managed to surprise him. *Clack, clack, clack.*

"I want a royalty," I pressed. "A percentage. Of whatever you get from this."

"Done," he said. "To be negotiated after we see what your work is worth."

"How do I know you'll be fair?" I demanded, wondering if I was pushing too hard.

"I could always shoot you now," he said languidly. "On the other hand, I'm always fair to those who join me."

Huh. There was a very slight possibility here that he actually *would* want to recruit me permanently and not kill me no matter what. Too bad my allergy to authority kept me from being tempted.

The Lancer sat back, self-satisfied, clacking his meditation balls.



WE DROVE north, and north, and after many miles and a few stops we pulled up among some overgrown concrete ruins on a bluff overlooking the Pacific. One of the men uncuffed me from the door and hustled me out with them, not overly roughly. Perhaps he was being respectful of the implication that I might someday be one of them.

The Lancer levered himself out after us. He was a tall man, and large-framed, with a slight limp that he used his walking stick to mitigate. "Deliver," he said to me factually, "or we'll kill you."

"Okay," I said, looking around. This place must have been an old collection of war bunkers, or...or something. I wasn't sure.

I wiped a sleeve across my forehead. I was sweating, and my self-inflicted surgery hadn't stopped bleeding. The bandage I'd stuck over it

had gotten heavy—I could feel it when I moved.

My kidnappers nudged me toward a large gray cube that was taller than the rest, a proper building squatting on the cliff with tiny square holes punched in it instead of windows. The foundation was cracked, and tangled vines scraped themselves up the south side. We stepped around a rusted metal sculpture of discarded junk as we approached the heavy door.

Someone catapulted out.

“Hey *hey*, you’re back, you found the chick, fucking brilliant. Now I need to send some of these overgrown house pets for supplies, because you brought us to a *challenge*, and not that I don’t like a *challenge*, but if I’m gonna make this place go boom I need a lot lot lot more boom-makers. I gotta wire this up tighter than a goat’s sphincter. If your oafs hadn’t been too motherfucking pansy to bring my lab along—”

The Lancer waved the personage off with, as far as I could tell, a genuine smile. “We’re temporary here. No need for any of that.”

The fast-talking explosives expert pouted. I finally got a look at him—or her? I wasn’t sure. Charcoal-dark skin and a mop of dreadlocks, and a round face that sat atop a round body that constantly shifted its weight around like he (or she) was rolling back and forth. “But it’s a *challenge*,” the person whined. “I *like* a challenge. And now you gotta go shittin’ in my Cheerios.”

“A little,” said the Lancer, putting a hand on his hyperactive friend’s shoulder.

“You motherfucking cunt,” said the small person amiably. “Hey, I’m working on the foundation. You gotta see what I’ve put together. It’s balls-out cool, I’m telling you...”

The two of them disappeared into the darkness of the bunker.

“That’s D.J.,” said one of my escorts, the one with a hand on my arm and a Glock pointed casually at my head. “Would as soon shove a stick of dynamite up your ass just to see how the shit spattered.”

And who was apparently a right little sociopath who was kindred spirits with the Lancer. Wonderful. “Not sure why you put up with them,” I needled my captor as we followed the Lancer and his little friend into the cool darkness. “A whole lot of you have been getting killed on this job.”

He shrugged. “More money for the rest of us when the pie splits.”

Yeah, *that* seemed like airtight logic.

The goon steered me up a metal staircase with another guy following behind us. His fingers on my arm dug trenches in my tired muscles. My breath lurched in and out too fast by the time we reached the top; I tried to slow the inhales, breathing through my nose, but only had moderate success.

We headed down a dark concrete hallway to a heavy metal door with a slot in it; the second guard dragged it open and they shoved me inside. I stumbled, my side stabbing, and fell against a table.

The door banged shut before I registered the arm under my shoulders trying to hold me up. “Oh my God,” said Sonya Halliday. “What did they do to you? Are you all right?”

“Hey,” I said. “Found you.”

“For God’s sake, sit down.” She helped lower me into a chair. The room was dark; a dim fluorescent light gave it some cold illumination, but the solid walls and ceiling made it a concrete box. I sat on the sole chair at a wooden table covered in scribbled-on pages and stacks of printed-out mathematics papers. There was a mattress on the floor against one wall. And a bucket. Well, that accounted for the smell.

“Where are you injured? What can I do?” Halliday was still hovering over me. Her neat look had devolved into dishevelment, her clothes streaked with dirt and her hair sticking out from its tight knot, but she didn’t appear hurt. That was good.

“It’s okay,” I dredged up. The dizziness was fading. I hadn’t realized I was dizzy. Shit. “I’m okay. It’s not life-threatening. Just inconvenient.”

Especially considering my own goddamn plan was predicated on the idea I’d be able to get us out of here. I glanced around the disappointingly impregnable room. Not many options. We might have to change some variables—but what?

“The, uh, the accommodations were better the first place they held me,” said Halliday dryly. “I think they’re moving somewhere else soon.”

I tried to do a subtle eyebrow-raise at the door; it felt more contrived than anything, but she seemed to get it.

“Are they watching, you’re asking? I don’t think so. The first place they had me, yes—it was a proper sort of prison they’d made up. But I

don't think they're set up for it here. I had a blood sugar episode when we first got here—I'm hypoglycemic, but I'd been all right before then." She cleared her throat. "They didn't hear me and didn't notice for some time, and then they were quite angry. So I don't think they're watching. I get the feeling...I think things are going wrong for them. They don't seem happy."

"Yeah, that was us," I said. "We've been poking the bear. You do it enough times, he runs into a trap."

"Forgive me for saying so," said Halliday, gazing down her nose at me a little like she had back in her office, "but the bear does not appear trapped to me."

For some reason Halliday's doubtfulness amused me this time. The woman had a spine—excellent. "Oh, that's because you don't know me," I said, hoping it was true. "I'm very good."

"At what?"

"Math."

Halliday blinked at me, then said with a perfectly straight face, "As am I. I do not believe that's given me a solution for escaping through solid walls."

"I'll figure something out," I said. I leaned on the table and pushed myself up, ignoring the fact that I had to lean on it hard, or that I needed a moment to get my balance.

The pages covering the table were filled with dense mathematical writing, in what I could only assume to be Halliday's precise hand. I covered for my lack of equilibrium by frowning at them. The printed papers stacked to the side weren't Halliday's work, from what I could see—just background references. And the longhand sheets...

"These are the notes you had stolen?" The bits of the algorithm matched up only raggedly, the connections between the insights missing. "Sorry, Professor, but this doesn't exactly look complete."

"I know." Frustration bled into her voice. "I can't—this was decades of work. I can't recreate every—" She took a deep, shuddering breath.

She wasn't making sense. I hadn't figured I was *that* out of it. "I thought they had the proof already, and they only needed you to interpret it. Wasn't that the whole point? That they stole it from you?"

“Yes, except whoever stole it—” She took another breath and moderated her tone, as if she were back at the university about to address a lecture full of students. “It wasn’t them. They don’t seem to be in possession of it.”

“Wait, so there’s someone *else* out there with your proof?” I sat back down in the chair, hard. Maybe I needed another minute before getting up after all. “Say that again.”

“They aren’t the ones who stole it,” she repeated. “I believe they are the people who attacked you and Arthur, to avoid word of my work getting out—they must have been watching, or listening. I presume they escalated in order to beat whomever does have my work, but they’re not the ones who took it. They kept haranguing me at first, insisting I tell them who had stolen it, or accusing me of lying and demanding where I’d hidden it all.”

“That doesn’t make any sense,” I said.

“That there would be more than one interested party?” she asked. “Why not? I think...I forget sometimes, that mathematics is not merely a playground of ideas, but intersects with the real world in profound ways.”

“So we have to get out of here, *and* still find out who took your proof and get it back from them?” That sounded like a lot more work, work I wasn’t in shape to tackle.

Whatever. Getting Halliday out of danger was the first priority; I’d think about the rest of the job after that.

“The man who has me—he is obsessed with the P versus NP problem and efficient solutions for any question that might lead him there,” said Halliday. “Though I do believe he intends to use my work for economic gain, I gather his greater dream is for it to lead to a proof that P equals NP.”

“That’s idiotic,” I said. “Factoring isn’t NP-complete. There’s no reason your proof would mean—”

“I know,” she said. “But he’s said things—said he’ll keep me here until I generalize my work to an NP-hard problem, which does not make the least bit of sense, but he said he’ll do—he’ll do things to me if I can’t...” Her voice trailed off. “He won’t hesitate to hurt us. I think he’s delusional.”

Delusional was right. Halliday had a fantastic result, but it sounded like the Lancer was after the Holy Grail of mathematics.

I remembered the notated shelves of binders. Someone with a middling talent for mathematics who had become obsessed—obsessed with a dream he'd never be good enough to realize.

I pressed a palm against my temple, hard, trying to think. “So this guy’s a computer expert and, uh, let’s say an armchair mathematician, and he’s got a fanatical obsession with algorithmic complexity. Okay. So he’s probably keeping up with the pros who are doing this work, maybe hacked your email along with the email of every other person who’s working on this stuff, and wrote a program scanning for whoever might be close to solving it.” Dr. Martinez’s words came back to me: *You could write a program that scans for keywords quite easily. It’s not paranoia, it’s just fact; you accept it and live in the modern world or you don’t.* “His program gives him a ping when you email the NSA and talk to your friend Zhang. So he starts spying on you, arranging to kidnap you. If he bugged your phone, too, at that point—he would’ve picked up your first conversation with Arthur, when you told him your work was stolen. When he had his guys run us off the road, I’m betting he wasn’t so much worried about us knowing what was going on as that he knew we were going after the missing proof, too, and he’d go to any lengths to stop us from getting there first.”

It fit. Christ. We were lucky the Lancer hadn’t bugged Halliday’s office; if he had, he’d have known I’d just met her then, and we wouldn’t have been able to pretend I’d been helping her all along. “That still doesn’t tell us who stole your work in the first place.”

“The worst part is, I don’t think I can do it.” Halliday lowered herself to sit on the mattress. “I don’t think I can recreate it. I’ve been trying—slowly, because I knew Arthur would be coming, but...the man who has me—has us—he knows enough to check my work, so I can’t stall too much. And most of my hesitation...it hasn’t been faked.” I could tell she was trying to speak plainly, but her shoulders hunched, and her fingers clenched against the mattress as if she was fighting to keep her composure. “I don’t think I can do it. I think...I’ve lost it. That’s the worst part of all.”

Personally, I thought the potential bodily harm to us and the potential economic threat to the world at large from whoever *did* have the proof ranked as being a lot worse than Halliday not being able to recreate her notes, but I didn't say anything. Instead, I pulled over some of the pages and flipped through them.

Interesting. The structure of the proof was scattered but apparent—I could see it, one insight that should jump to the next, but with the steps in between left blank and unarticulated.

Well, that was only a little harder than reading a particularly dense paper. The intuitive leaps were already there. “Don't let that get you down. I think I could finish it from here.”

She stared at me, her face going very stiff and still. “You're joking.”

“No. You have most of it already.” It was a killer result, if I was honest. Creative and brilliant, turning complexity theory inside out before inverting it back again. I was impressed.

But I wasn't going to tell Halliday that and ruin my fun. I flicked her papers back down. “It's just connect-the-dots. Child's play.”

It was hard to say whether in that moment Professor Halliday would have preferred to shoot me or hug me.

CHAPTER 17

“FIRST THINGS first,” I said. “We get you out of here. Then we can worry about the proof.” I stayed sitting and pointed at the door. “When do they open that?”

“Since I’ve been here? Never. Except for my blood sugar episode. And when they brought you in.”

Dammit. If I’d been on my toes, I could have mowed down the guards the instant I saw Halliday and gotten us both out then. I hadn’t been thinking fast enough. “Fake an attack, then,” I said.

“You think that would work?”

I pondered it. Probably not, actually. If they were smart, they’d watch through the slot in the door until I was safely on the other side of the room and come in with weapons trained on us.

Ordinarily that might still change enough variables for me to find an opening and get us out. In my current condition, and with Halliday to protect...

“What about food?” I asked. “They have to bring food.”

She pointed at the slot in the door. Definitely enough room for a tray.

“We need a reason for them to come in,” I said, thinking out loud. “Something that will surprise them. Throw them off. Panic them.”

“And then what?” Halliday’s dark skin had a slightly greenish cast in the fluorescent light. “We’ll never get past them. We’ll die.”

“Aren’t you a party pooper,” I said. “Professor, I can protect you. I promise.”

“You can barely stand up on your own.” The words could have been mean, but instead her voice was empty and factual.

Her skepticism made me even more determined. “I told you, it’s not that bad. I’ll deal with it. Besides, what choice do we have? You’d rather stay here?”

She didn’t answer, just pressed her lips together for a moment. “Where’s Arthur?” she asked finally.

“With the NSA. I beat them to finding you.” I bared my teeth in something like a smile.

“What? We should wait for them, then!”

I knew Halliday’s opinion didn’t *matter*, but her reaction was still like a spike in my chest. “We don’t know they’ll find us,” I argued. “The guys who’ve got us are *good*, maybe good enough to evade the NSA, and this situation could go very bad at any moment. What if they decide to kill us and rabbit? What if the Feds do track us down, and these guys blow us all to kingdom come to avoid capture? You really want to sit on our hands and hope the government rides out of the woods on white horses?”

“If Arthur said he’s coming, he’ll be here,” said Halliday. “He’ll come for us.”

“I’d rather we came for us.”

She tilted her head at me. “You don’t trust him.”

“What? No, I do!” I protested, surprised and disconcerted at the conversational left turn. “But trusting Arthur doesn’t mean—come on, there are a thousand things he can’t control. Just because he would *want* to help us doesn’t mean he’ll be able to come through.”

“He trusts you to come through,” she said softly. “I can tell.”

“But I’m—listen, Arthur’s handy with a gun, but I’m way, *way* better than he is. He trusts me to come through for him because he knows I can.”

“Because he knows you *will*,” she insisted.

“I really don’t know what point you’re trying to make,” I said, my emotions prickling. “What you’re saying doesn’t make a difference. It doesn’t matter what he wants to do or how much you trust him to want it,

because sometimes no matter how hard you try, there are still going to be things you can't make happen."

"I know," she said, the weight of the universe in those words.

I was starting to get angry. "So...?"

"What you're saying is, is rational, but—I do trust Arthur that much, despite everything. Regardless of how illogical it seems. And I think...I think it's sad you don't. That's all."

The only person I trusted to have my back to that level was Rio, and for good reason. "I don't know what to tell you," I said to Halliday stiffly. "You're not talking about trust. You're talking about faith."

"Maybe," she said. "Is faith so bad?"

"Faith *by definition* is unsubstantiated belief!" I tried to keep my voice low enough so anyone lurking outside wouldn't hear me through the metal door, and I managed the decibel level, barely. The wound in my side wrenched. "For Christ's sake, aren't you a mathematician?"

"Mathematics doesn't preclude faith."

"Of course it does!"

"Then I feel sorry for you," she said.

I closed my eyes and took a breath. I didn't need Halliday's okay to break us out. All I needed was a reason for our captors to burst in here without thinking about it.

With a clang of metal, a tray with two small meals appeared through the slot in the door. Halliday hastened up to get it. "Ever since I had that attack, they've been bringing food every hour or so," she explained. "More than I've needed, so if you want some of mine..."

They were lucky she hadn't tried going on a hunger strike. "Have you been stockpiling it?"

Her head came around to me in surprise as she put the food on the table. "No. Why would I do that? I put the extra back on the tray."

"Well, start," I said. "Eat what you need to and stick the rest in pockets. My half, too."

"What will you eat?"

"We're not going to be in here long enough for it to matter," I said. The thought of food still made nausea nibble around the corners of my

stomach anyway. “Meals might get a whole lot less regular once we’re running, and I don’t want you fainting on me. Now, tell me. Do they come by exactly on the hour, every time?” I checked my watch. The tray had come through at thirty-three seconds past two p.m. If that timing was consistent, it might be exact enough to use for the execution of our escape.

“I don’t know,” Halliday said. “They took my phone.”

“We’ll time the next one, then. And then the next one is when we’re out of here. Before dark.”

“I still think we should wait for Arthur,” said Halliday. “This is foolhardy. Reckless.”

“Reckless is where I live.” I tried to grin and failed. “It’s too dangerous to wait, Professor. I’m not giving you a choice.”

“What’s your plan, then?” She addressed the question as if she were giving an oral exam, one she expected me to fail.

I hadn’t quite worked out what our best shot would be myself, but I didn’t say so, instead ignoring the professor and taking a moment to think. The regular meals gave us scheduled opportunities of contact with our captors, which meant I could try something timed. And what would throw them into a panic more than the chance of losing their bosses’ assets?

Those assets being the half-finished proof, Professor Halliday, and me. She was going to kill me.

“We only need them to open that door,” I said slowly, “and they’d rush in to save us, if we were in danger. From, say, a fire.”

“A *what?*”

“We’ve got plenty of fuel right here,” I said, nodding at the papers on the table.

The look of horror on her face was almost comical.

“Oh, stop looking so appalled,” I said. “You can rewrite it.”

“Just to recreate this much has been—”

“So the second time will be easier,” I said. “Christ, I’ll help you.”

“This is my life’s work!”

“Yeah, yeah,” I said. “Not really; your life’s work is somewhere else we’d better find. But we don’t want to leave these guys with a copy anyway, and this means we won’t have to carry it with us. Win-win.”

“This is madness!” Halliday lifted her hands in what looked like an appeal to the heavens. “How would we ignite anything? And what’s to stop the fire from killing us before someone gets here?”

“Oh, ignition’s easy. It’s just math.” I might have been deliberately needling her. “As for us dying, do you really think this room is going to burn?” I gestured at the concrete surrounding us. “Smoke inhalation will be the only problem.” I thought through the science of combustion, then diffusion, the particle disbursement in the air. If we burned everything that would combust well, the papers and the table and chair, we’d both suffocate if they didn’t get to us fast enough. On the other hand, if we didn’t burn everything and they *did* open the door, we’d risk them being able to put the fire out before all of the papers were consumed. Burning it all would make the fire big enough to keep the mathematics neatly out of their hands.

“Madness,” reiterated Halliday.

It was possible she was right, but I wasn’t about to back out now.

CHAPTER 18

THE NEXT food tray came at only a handful of seconds after three. Perfect. I wanted the fire going well enough that they wouldn't be able to recover the proof even if they charged in with an extinguisher, and after that we had about a two minute window before it would get dangerous for us. I didn't tell Halliday that part.

The first thing I did, just in case the guards *were* lurking and listening, was pick up the chair and smash it against a concrete wall. The joints snapped apart, the legs of the chair clattering to the floor. We both glanced toward the door, but nobody came running.

I brought the proof papers and the mathematical journals over to the side of the room farthest from the door and started crumpling and folding them into a nice bonfire tower. Halliday watched with an expression of twisted tragedy before turning away.

Next I levered under one end of the table—my torn muscles protested, *ow*—and hauled, building enough momentum to slam that against the wall, too. I didn't have any way to break apart the tabletop, but the legs were nice logs, and I gathered them together with the smashed-up chair.

On second thought, I hefted one of the table legs back out of the pile. Decent balance, with a center of mass at a perfect point for a good swing. It would pass as a weapon. The rest of the wood went into building my little pyre.

Halliday had begun watching me again, with the gruesome fascination of someone observing a train wreck in slow motion. "You're injured," she

tried again as I stacked the wood around the papers. “If we wait just a few days, maybe there’s a better way—”

“Too late now,” I said, glibly enough for it to sound like fact. I checked my watch. We still had some time, and if I started the fire early, I might kill us. “They’re not within shouting distance or they would have heard all that. The minute they bring the food, your job is to start screaming about fire. Be ready to get down by the food slot.”

I half-expected her to refuse. But then she went and stood by the door, her every movement dragging with skepticism even as she obeyed.

I’m not getting her killed. I’m getting her out.

We waited, Halliday by the door and I by my fire pile. I spent the time fraying bits of thread off my clothes to build a fluffy little kindling bundle and pretending not to see the disapproving glances Halliday cast my way. I kept expecting her to declare that she wouldn’t be a part of any such foofaraw, that the proper way to escape was to wait for government authorities, but she didn’t offer any more argument.

The minutes counted down until we were almost at the hour. Finally. I fluffed up my thread pile inside a cradle of crumpled paper and picked up a narrow, tapered rod and flat piece that had originally been part of the chair back. “Get ready, Professor.”

I’d never tried this before, but I knew the general idea, and the method was just friction—and friction was just physics, and physics was only math. I knew how it had to go. A delicate operation, but with the right pressure and the right timing, it would all work out.

I trusted the numbers.

I stamped a boot down on the flat piece, poised the rod against it, pressed my palms flat against the sides, and started spinning it between my hands, pressing it down into the wood at the same time. The forces balanced perfectly, a pleasing vector diagram of pressures and normal forces that settled me enough to ignore the pain in my still-banded left hand and my broken right thumb as I rubbed faster and faster. Mathematics made everything okay. I could sink into this, accomplish what I needed to do.

The rod began to bore into the wood below it, sawdust gathering where it spun—sawdust that began to blacken as I kept up the friction, the rod

spinning relentlessly. The sharp tang of smoke in the air was a benediction. It was working.

The blackening sawdust turned to a tiny coal of an ember, and I stopped spinning, my palms prickling with numbness. I picked up the piece of wood and very carefully tipped my tiny ember into my thread pile. Then I leaned down and blew very, very gently.

The stoichiometry of combustion filtered through me as I added O_2 into the equation, nursing my delicate little ember against the threads. Smoke began curling up in a thin tendril, tickling my nose. I kept blowing.

Some of the threads began to blacken against the ember, crinkling into ash...and between one moment and the next a little flame burst up.

The flame swallowed the ball of thread and licked at the paper cupping it, and I quickly held other folds of crumpled pages around it until their edges flared, too. Then I poked the pieces of burning paper into each corner of the kindling pile. I didn't need to check my watch again. I'd been tracking the time closely, and we were just over a minute before the hour—right on time.

I moved over to the side of the door, my table-leg club at the ready. Halliday had crouched down by the food slot, her jaw clenched. Across the room, the flames darted upward from the engulfed papers, limning the wood.

The hour struck. The wood began to catch, the stench of burning varnish making the smoke bitter. The tower of crumpled paper was quickly dwindling and collapsing beneath.

Smoke had started to roll against the ceiling and then haze down through our precious breathing space. Halliday coughed. My eyes were watering; I blinked stubbornly, wrapping my arm across my mouth and breathing through my sleeve.

One minute after the hour. They were late.

The smoke in the room was building up to cloud the air, making it hard to see. I was starting to feel woozy. I repositioned myself into a crouch, ready to rocket up into the first guard to enter, but even the lower position didn't seem to help much. Beside me, Halliday had pushed open the slot in the door and was breathing against it. She beat on the metal next to it and shouted.

No one came.

Shit.

Halliday's shouts devolved into coughing; she gave up her efforts and slumped against the slot. She had pulled out a handkerchief and had it pressed against her nose and mouth, her eyes streaming. Who carried handkerchiefs these days, I thought groggily.

Two minutes after the hour.

My lungs spasmed into a cough at every other breath now. I tried to stop, to sip the air more shallowly, to be ready, but it was too much. The wound in my side throbbed.

Two and a half minutes. Two minutes forty seconds. Forty-one seconds.

Someone outside the slot shouted, loud and profane and the sweetest sound I had ever heard. The tromp of boots, and something clanged—

“Help,” croaked Halliday.

I didn't know if they heard her, but at this point they didn't have to. Smoke was billowing through the room and would be pouring out of the door slot. The commotion continued on the other side, more yells and bangs and then the scrape of keys in the lock...

The door flew open, and I shot to my feet and brained the first man through with my club.

My aim and balance were off, and the blow was only glancing, taking the man down but not killing him. I let it pass as good enough and rocketed my elbow into the man behind him.

Vague silhouettes coughed and bellowed commands through the smoke, a fracas of confusion. As the man whose face I'd just smashed in went down I grabbed for the weapon I knew he must be carrying, the outline of an AK apparent as soon as my hands closed on the wood and metal. I squeezed my eyes shut and flipped it around, letting the mathematics be my eyes, and fired.

The gun was set on full auto—of course—but I controlled the barrel and managed to aim. I wasted two rounds, but five bodies thumped down before me. I squinted my eyes open. The air was starting to clear into the hallway, but smoke still rolled around me in waves, suffocating my senses and diffusing my vision into gray haze.

I groped behind me and found Halliday's sharp elbow to haul her up. She started to fall to the side and I ducked under her arm, yanking her taller frame against me and forcing her to lean into me as we staggered out. We hustled, gulping cleaner air into scratching lungs. Halliday was wracked with coughing.

More shouts echoed through the corridor. More armed goons, coming this way.

My left leg almost buckled underneath me as the wound in my side stabbed. *Shit.* I forced myself upright and dragged Halliday with me to the stairs, and we stumbled down, half-missing some of the steps and almost going into a headlong tumble. More men, bristling with armaments, burst around the corner as we hit the bottom. I'd flicked the selector lever to semiauto and fired before they could aim. An AK wasn't as accurate as an M16, but at this range I didn't need it to be. Nobody got a shot off.

Here in the hallway, the gunfire thundered through and echoed off the walls until it was twice as deafening. Halliday flinched against my shoulder. *Well, excuse me, Professor.*

We got to the main entryway before they cornered us. In the same place I'd followed the Lancer and D.J. in from the sunlight, a square block of brightness tempted us with freedom, but it was far—too far. Goons poured in from all directions, loading weapons as they came. Three smoke grenades sailed over from our left and landed hissing in front of us. Not more smoke...

My leg muscles spasmed again.

Nobody had fired—they must be trying to take us back alive—but my body was giving out on me faster than I had expected, and I'd breathed a lot more smoke than I'd meant to. The mathematics wavered in melting lines around me, and the AK wavered in my hand. I wasn't sure I could fight them all and win.

Through the smoke, through my streaming eyes, I caught sight of something snaking up the wall.

Hey, I'm working on the foundation, the insane D.J. had said. *You gotta see what I've put together. It's balls-out cool...*

He'd been setting this base to implode, for the walls to crack and crumble and bury themselves, just like the other one.

A bullet wouldn't set off plastic explosives. But the detonation mechanism—if someone happened to be a *very good shot*—

I mustered all my strength, brought the AK up, and fired.

The explosion tore through concrete and stone, and I jerked Halliday with me, running, running, every minute expecting a 7.62 round to punch through my back. But men were screaming all around us, dashing to save themselves—even the ones who'd been closer to the exit than we were needed precious seconds to lurch around and figure out what was happening, to turn and race for the outside, and we sprinted past them toward light and freedom. Concrete blocks smashed down as the ceiling began to cave in. We were so close to the door—we would make it, we could make it, we had to make it—

We burst out into the sunlight, the overgrown weeds slapping at our shins. I yanked Halliday along with me, away, away, the building collapse a thunder on our tails. I flipped the selector switch on the AK back to full and sprayed it behind us without looking, dissuading pursuit.

No one fired back. Most of the goons had been way too far from the door.

We ran.

Thoughts skittered through my brain in a jumble. We had to get to a vehicle; not everyone would have been killed and the rest could keep coming after us, shooting at us as we ran. But I didn't see any sign of their vans or SUVs. Where would they be keeping them?

We kept running, the sky vast and blue and too bright above us, and we almost ran right off the bluff into the Pacific.

Halliday yanked me back, stumbling herself. I'd glimpsed the surf crashing against the rocks far, far below.

Tires screeched behind us, and I pulled Halliday down. We hit our bellies in the dry grass and peered back the way we had come. But the SUV wasn't gunning for us; it was haring away, skidding in its hurry.

Another followed, and another, swerving and careening as if they fled from the devil.

"They're running," said Halliday, her voice hoarse and scratching. She coughed into her shoulder.

That they were. And it hit me—if we were anywhere near a single other sign of civilization, this explosion would attract the authorities, no question. This area might be fairly deserted, but nowhere in Southern California was the middle of the Yukon, and unlike some people I'd tangled with, these guys didn't have law enforcement in their pockets, couldn't afford to bring attention to themselves when a federal investigation was already barking against their heels. They didn't have time to stay and hunt us down and murder us, not when it might mean their own skins, not when they didn't know if law enforcement had caught wind of this.

Their overzealous explosives expert had screwed them.

I prodded Halliday, and we belly-crawled until we were behind a rolling knoll of the bluff, right on the edge of the cliff with our feet practically dangling over the edge. We sat there and breathed, the sun in our eyes, while the bad guys ran. I kept the AK ready just in case, but to a man, our captors put their own preservation first.

We sat for a long time after we'd heard the last engine peel away, the sun dipping toward the ocean in front of us. Then I clawed my way to my feet, grabbing onto the tough grasses behind us to steady myself. "We'd better get going, Professor. They might come back if they determine no one called this in."

She nodded and rolled onto all fours, crawling away from the edge before attempting to stagger upright herself.

I limped over to join her, and we started back the way we had come, a weaving, drunken stumble back toward the bunkers. With the adrenaline receding, my legs shook and threatened to buckle at every step, and I was pretty sure the wound in my side was bleeding again. A lot. "You might have to drive," I said, my voice scratching as badly as Halliday's, each word barely making it out whole.

"I'm not sure they left any vehicles," she answered, scanning our dusty surroundings. We'd hiked back beyond the building we'd blown up, to where tire treads gouged their way down a dirt track away from the shore, but none of their transportation fleet was in sight.

"Oh. Well then. I suppose that makes things easier." A strange sort of giddiness pecked at my consciousness. I wondered if that should worry me.

“We don’t know where we are,” Halliday pointed out.

“It’s Southern California, not the Yukon,” I said, giving voice to my thoughts from before. “How far from a main road could we be?” Bad question, considering the state we were both in, but for some reason I found that funny. I bit my lip to keep from smiling and turned to orient myself down the tire-tracked road. “We should keep moving. I don’t want you to collapse from low blood sugar. Speaking of, eat something.”

Halliday limped after me, obediently tearing off some of a roll from her pocket and chewing at it. “What if they come back before we make it to a road?”

“That’s what I’ve got this for,” I said, hefting the AK. A small, embarrassingly weak heft, but I ignored that. “They’re not going to get us again.”

Halliday hesitated, then nodded. She didn’t look particularly happy with my methods. *That’s gratitude for you.*

We started trekking down the dirt road. The sun was behind us, but it was still too bright out, the sky searingly clear. My wound oozed with every step, the rifle becoming more leaden in my hand.

We hadn’t even made it out of sight of the bunkers behind us when a dozen black SUVs tore up the slope.

Oh, God.

Shit. Halliday was right. They’d come back.

I steadied my stance and leveled the AK, making sure the selector was back on semiauto and counting how many shots I had left. I’d want to take out the driver of the lead SUV, to time things to cause the ones behind it to crash, maximum possible casualties per shot—

“Wait!” shrieked Halliday. “Wait, wait, don’t shoot!”

I hesitated an instant, my finger already on the trigger, and saw the lights.

Red and blue. Police lights. Flashing out of the SUVs.

And another thrum came up on the edges of my hearing—helicopters.

Holy shit. The Feds really had found us. Or maybe someone had called in the explosion as the bad guys had feared. Whatever the reason, they were here.

The AK suddenly felt excessively heavy, and I let the butt end thud into the dirt. There was something wrong with my legs. I sat down hard after it, the weapon falling across my lap.

Well-armed agents were pouring out of the vehicles. Halliday thrust her hands in the air. Someone pointed and shouted. Halliday started calling out, babbling about how no one was left here but us.

A figure detached from the ranks and strode over.

The same fucking DHS agent who had captured me. Of course she had to be here.

“What’s the status here?” she demanded.

“They rabbited,” I said. “Or died. Most of the bunker blew up when we escaped.”

“Escaped?”

“Yeah,” I said, not elaborating. No need to tell her getting caught had been the plan. “I wouldn’t send people in there before the bomb squad.”

“I’m aware of that,” she said with a good dose of sarcasm. “Do you need medical attention?”

“Not from you,” I said.

“I wasn’t talking to you.” It was dawning on me that she was pissed. Nice. “We’ll have EMS check you out,” she continued to Halliday.

“I—I think I’m fine—”

“Nevertheless.”

“Arthur!” said Halliday.

I looked. Arthur had pushed through the crowds of troops and was jogging toward us. Damn. I’d almost shot him.

“Go,” I said to Halliday. I avoided looking toward Arthur myself. Best not to let the government know I was connected with him in any way, if I could help it.

Apparently only having been waiting for someone to tell her it was okay, Halliday took off at a hobbling run for her friend.

“You don’t have any authority here, you know,” said the DHS agent from above me.

“I don’t see why not,” I said. I was still sitting on the ground, but whatever. “Considering I did your jobs for you and all.”

“Did our—we were trying to *catch* the Lancer! Put him and his men behind bars. Contain the proof. Do you have any idea what you’ve done here?”

Wow, she was *really* pissed. “I rescued the woman I’m working for,” I said. “I’d call that a win.”

Her face twisted in contempt. “You’re a shortsighted idiot. And you’re under arrest.”

“What for?”

“Interfering in a federal investigation.”

“Because I dug out your tracker?” I said. “Do you really want to try me in a court for that?”

“Who says this would ever see a courtroom?”

Well, it wouldn’t because I wouldn’t let it, but still, that assumption from *her* was just a little bit terrifying. “Your bosses, then. You really want make a report saying you had me, tried to strongarm me into playing things your way, and then promptly lost me? I wouldn’t want to look that dumb if I were you.”

Her lip twitched. I really think she wanted to punch me. Or, well, arrest me.

I adjusted my grip on the AK. Just in case.

“Besides, I did save your partner’s life,” I said.

“And if you think that gives you license to rampage off and destroy—”

“Look,” I said. “I’m really fucking tired. Can we do this later?”

“We’ll do it from a debriefing room,” she said. “After which I’ll decide whether to charge you. Get up. Leave the weapon.”

I supposed there was no getting around having to talk to them, at the very least. Maybe I should try to stop pissing her off enough for her to want to arrest me out of spite.

I let the AK tumble into the dirt and pushed myself up. My muscles were starting to stiffen and seize in odd ways, making it hard to stay upright. I forced myself not to sway. I’d lost track of where Halliday and Arthur were.

Shit. I’d forgotten to warn Halliday against telling the Feds any details about me.

Okay, that could complicate matters. “I want to talk to my client,” I said.

“Not a chance.” The DHS agent took out a pair of handcuffs. “I really won’t object to using these. Come with me. Now.”

The rest of the agents had dispersed, the bomb squad inching forward first and sending in their robots in advance of the humans. My agent friend, proving she had a shred of humanity, took me to their on-site medical staff first. I watched like a hawk while the paramedics patched me up, and I checked the area mentally afterward. Fucking NSA and their fucking microchips. But apparently field EMTs weren’t qualified to implant tracking devices—that, or they just didn’t fancy doing it while I was awake.

The agent put me in one of their SUVs along with several Feds who were geared to the teeth. I tried to demand to talk to my client again, and she slammed the door in my face.

Fuck.

Well, whatever was going to happen was going to happen. If I had to break out of federal custody again, I would.

I should have cared a lot more about getting taken in, but I just didn’t have the energy.

CHAPTER 19

MY HARD-FACED agent friend had said her name was Jones. I didn't know whether to suspect that of being an alias or not—she didn't look like a Jones, but then, would a Fed pick such an obvious fake name? I didn't suppose it mattered.

She left me to wait locked in a small room sitting at a metal table. The place lacked the classic one-way glass so popular on television and in police stations, but I was sure hidden eyes were watching from cameras I couldn't see. I put my head down on the table and tried to sleep, but every time I started to drop off, I jerked awake with the sensation that something large and dark was watching and waiting for me. Fucking unconscious mind.

I supposed I should have been spending some time figuring out how to escape, but I was too goddamn tired. And besides, with Arthur and Pilar and Halliday and Checker all snarled up in this, I rated the probability of being able to walk anonymously away at something very close to zero.

How had we ended up working *with* the government? Oh, right. Arthur.

After leaving me to sit and glaze over for a few hours, Jones came in and leaned against the wall across from me. “Cas Russell,” she said.

Well, fuck. Not that there had been much chance they would miss that. Even if Halliday had kept her mouth shut, which she probably hadn't thought to do, it was a very small leap for them to start making a few phone calls about me to certain disreputable people. If only I were a six-foot-tall white guy—they would've had a list of names way too long to

check. Being a foot shorter, brown, and female meant a few questions in the right corners would get them a correct ID, even from people I'd never met.

Unfortunately for me.

Jones blew out a breath. "Now what's your real name?"

Okay, that wasn't what I had expected. "What do you mean?"

"You must think I'm an amateur."

"It seems you've been asking around about me," I said with pleasant sarcasm, mentally upticking the likelihood that she wasn't really a Jones herself. "I don't know what I can possibly contribute."

"You really want to do this?" Her stance became more aggressive. "Right now we don't give a fuck about you or what you get up to in your spare time. But you're a fingernail's width away from going from 'witness' to 'perpetrator.' So how about we begin again, and either you start acting like we're on the same side in this Halliday mess, or I'm going to go ahead and say we're not."

I measured my breaths, thinking as the landscape shifted. I'd assumed I was about to have the book thrown at me. But if Jones was telling the truth, I was in a lot better shape here than I'd presumed. If the Feds only cared about me in reference to Halliday, that might be a very good thing indeed. "Cas Russell is my real name," I said cautiously.

"Bullshit."

The instant denial was a slap to the face. "Fuck you," I said. "Hook me up to a fucking polygraph if you don't believe me." I could control my physiological responses enough to fool the machine anyway, but in this case I was telling the truth. "You want me to cooperate, maybe you want to keep those accusations to yourself."

She leaned back, evaluating me, pressing her lips together.

"I know you guys are stupid," I said, too annoyed to be polite, "but you know the type of work I do. If I burned an alias every job I'd never be able to build up a client base."

"So 'Cas Russell' is your business name."

I was out of patience. "Fine. My name is Bridget Twitwaffle. Stick that in your fancy computers."

Her stare was getting intense. I pretended not to notice and studied the ceiling instead.

“What happened in there?” Jones asked. Demanded, really, but at least we were off the name thing.

“I tracked down Professor Halliday and rescued her,” I answered.

“And your wise ass is going to give me a detailed account of every aspect of that statement, or I’m throwing you in a hole so deep light can’t hit the bottom. You read me?”

Yeah, I understood, her sloppy physics metaphor notwithstanding. “And if I do that?”

“Then we’ll see.”

I gambled. “I want some guarantees.”

She snorted a laugh. “Rich.”

“I bet I can find who stole Halliday’s proof to begin with,” I said. *Remarkably efficient*, she had called me. “You said we can be on the same side. I’m willing to give that a go.”

Her cheek twitched. “Because you were such a team player the first time around.”

“You implanted a tracker in me!”

She shook her head. “Here’s how this is going to work. You tell us everything you know about Halliday, and you give us your real identity and any aliases. If we feel like you’d be an asset at that point, we’ll talk. If not...we’ll have a different talk.”

My mouth had gone dry, but the part of my brain that controlled speech didn’t seem to have registered that this could be some real trouble. “What, did your superiors give you a lot of shit when I cut your leash? Or did your idiot partner get fired for being dumb enough to step on something that should’ve gotten you both killed? Maybe they’ll fire you, too, for not being quick enough at finding the very smart woman you were supposed to be rescuing and possibly dooming the global economy in the process—”

“You should be behind bars,” she interrupted, so viciously I sat back, mute. “We’d be doing the world a fucking favor locking someone like you away, and if I have anything to say about it, that’s exactly what will happen. The only thing that’s saving you right now, the *only* thing, is that we’re in a fucking national security crisis that you don’t seem to give a

rat's ass about." She paused, breath heaving, contempt writ through every line of her face. "You disgust me. The world might be ending for the rest of us, but you, it's your goddamn lottery ticket. And you don't even give a shit about it."

The accusation stung, deep inside where this DHS agent who didn't know me, didn't know a thing about me—where she couldn't see. And I would eat crushed glass before I would let her. "I give maybe two shits," I said glibly.

Her nostrils flared, her color rising, and I wondered if I had just signed my own arrest warrant.

Someone rapped on the door.

Jones ignored it for a long moment. Then she swept out of the room without saying another word.

I slumped in my chair, trying to remain expressionless for the hidden cameras, but not sure I managed. It would be nice if I could learn to keep my goddamn mouth shut sometimes. I seemed to have some sort of opening here I couldn't figure out how to slot myself into. I had the distinct suspicion an ounce of social grace on my part would have wrapped my involvement in this whole case up in a nice bow for the Feds and assigned myself to their list of people who were unsavory but necessary cogs in society and Not Worth Their Time.

Instead, I had pissed off one of the lead investigators to the point where she wanted me to rot in jail forever.

I rested my elbows on the table and pressed the heels of my hands against my eyes. Shit. It was so hard to think right now. My head felt stuffed with cotton, and the wound in my side, despite being properly dressed now, was an increasingly persistent burn. And there was a different sort of twisted discomfort mixed in with everything else, some tangled mess about Arthur and this case and Agent Jones's assumptions about me.

I'd expected Jones to step back in after a few minutes and continue her interrogation, but she didn't. After a while, I put my head down on the table again and tried to sleep, but it worked about as well as it had before. I'd get some alcohol to help with that, once I was off this job. A lot of it. Or some of the good pills. Or both.

A different agent came by a few hours later with a dinner tray, a hamburger and a bag of crisps and a soda. I ate mechanically while

considering the efficacy of trays as weapons, but I wasn't ready to try busting out yet. How likely was it that I'd torpedoed my chances of walking away from this? I couldn't tell. The same agent came back to take the tray away when I was done anyway, so I shelved that plan for now.

Finally, after a very, very lengthy wait, Agent Jones came back. My watch said it was almost the next morning, and I pettily hoped Jones had been forced to be up all night because of me—she was in the same clothes and the bags under her eyes had gouged themselves darker. Then I realized she probably would have been up all night anyway because of the continuing national security crisis and all, and I was just the asshole making everything harder.

Jones leaned against the wall across from me in the same posture she'd taken before. "Your client is demanding to see you," she said, after a long moment.

And they were letting her? "I thought you people weren't the sort to listen to demands," I said unwisely. God, I just couldn't keep quiet.

Fortunately, Jones ignored me.

She brought me to another room, one with about the same decor as mine but larger. Halliday was sitting at the table, and Arthur stood propped against it, seemingly casual but with a dangerous air about him. Like a panther on a branch. Arthur tended to pull that look off well—I was pretty sure I, on the other hand, always came off like a particularly aggressive hyena.

"Professor," I said. "You all right?"

"Yes," she said.

"What's going on?"

Arthur stuck out his hand. "Arthur Tresting. We met before. I'm a friend of Sonya's."

"Right," I said, shaking his hand stiffly. "Yeah. So what's going on?"

"First off, we better assume we're on tape," said Arthur, with no animosity about it. "Just so you ladies know."

"Yeah," I said. It was a smart reminder. "Good. Okay. How'd you get them to agree to let us talk?"

I'd been directing the question at Arthur, but Halliday was the one who answered. "I told them it was the only way they were getting the proof. In

a perfect world, they'll figure out who stole it and contain the information, but if not, they need to have it, too—as fast as possible—so they can work to counter any possible security threats. And the only place it exists now is inside my head. They know it, and I know they know it, and they know I know they know it.”

“Nice recursive dilemma for them,” I said. “So what do you propose, then?”

“I propose I give them the proof.” She flicked her eyes to me. Was I imagining it, or had I heard a slight emphasis on the second “I?” It dawned on me that Halliday knew to protect me. Either she'd figured it out, or Arthur had told her.

Holy crap. It was nice to be surrounded by smart people.

“I propose I give them the proof,” Halliday repeated, as if steeling herself, “in return for certain considerations.”

Excellent idea. “They let us all go,” I said. “No further interest. We'll have to figure out some way of holding them to that once your math is delivered.” I might have leaned a little too heavily on the pronoun, too. Dammit. Hopefully the NSA or whoever wouldn't analyze too closely.

“I've been recruited before,” said Halliday. “It never appealed to me. But the prospect of consulting with them—I would also be open to negotiating that.”

More bargaining chips. That was nice of her.

“I've given them a full and honest report of what happened,” said Halliday to me. “That my work was stolen and that I hired you to find it. That I was kidnapped, that some unknown people held me to work on the proof, and that you found a way in and broke us out. They know someone else out there has a copy of the proof, and they'll be looking for it. It's therefore of the utmost urgency that I tell them the contents.”

A “full and honest” report. Heh. I was grateful.

“They threaten you?” said Arthur.

Halliday had her hands pressed flat against the table. She looked down at them. “I believe it was implied. But that does not mean it would be their preferred course of action. Although we would be fools not to protect our interests, our government is not the enemy here, and I don't believe any of us wishes them to be.”

“What’s the plan, then?” said Arthur.

“We figure out our demands,” Halliday answered. “We present them. And we make a deal. Quickly, so as to ensure the NSA has whatever mathematical information they need to prevent attacks before they begin happening.”

“Bet they’ll deal,” said Arthur. “You’re right. They ain’t the bad guys.” I wondered if that remark was directed more at me or at the hidden cameras. Then I wondered if I was looking for reasons to be annoyed with Arthur.

Halliday pulled over a pad of paper and a pen. “Then what do we want?”

I tried to organize my thoughts. “I get to protect you. No NSA or DHS looking over your shoulder while you do this. I don’t trust them. I’m your line of defense while you’re writing the proof.”

She hesitated and then nodded, beginning to write in a flowing script. She understood what I was saying: I’d protect her, and I’d also help her write it.

“No charges,” said Arthur. “Against any of us involved here.”

“And if I catch them spying on you or me or sniffing around after my business,” I added to Halliday, “or if they decide you’re a liability because of what you know...”

“We keep a copy,” said Arthur.

Smart. It was a move that had worked for us before—make sure there was a way for the information to get out if someone felt it was more expedient to kill us than to worry about letting us live while we had the potential for spilling the knowledge.

“And I want to be able to speak freely where we do this,” I said. “No spying; I mean it. I’ll bring the tech to check.”

“Don’t think that’s unreasonable,” said Arthur. “Anything else important?”

Halliday handed him the list. “I believe we’ve covered it.”

CHAPTER 20

THE ONLY thing the Feds refused was us hanging onto a copy of the proof—they claimed they didn't trust us to keep it secure. I pointed out that, considering it was still missing and uncontained, Halliday was going to be helping them propagate security overhauls everywhere anyway. They pointed out in turn that the security overhaul meant we wouldn't be a threat to them and we therefore had no need for leverage.

I didn't like it, but considering I'd be able to write the whole damn thing out myself afterward without them being able to stop me, I let it slide. I wasn't too happy they wouldn't *know* I was capable of releasing the proof—that was the point of leverage, after all—but maybe I could tell them later.

The Feds set up a safe house for Halliday in the mountains. It was some sort of abandoned estate, old but clean and in good repair. The NSA set up shop at a respectful distance, controlling access to the house. We'd been able to dictate that Arthur and I would have the freedom to move in and out—either a mark of how irrelevant they thought we were or how over a barrel we had them; I wasn't sure which. Halliday herself wasn't allowed to leave until we had finished, and after that we would set up new provisions for her protection. But right now all anyone was concerned about was getting her proof on paper.

The first time I drove out through the perimeter, I expected someone to follow me, and I switched cars three times just in case. But nobody was on my tail, and when I came back with an array of bug scanners and went over the whole house for electronic listening devices, we determined the

Feds had been as good as their word on that as well. I wasn't sure whether to be pleased or suspicious. Maybe they had technology I couldn't detect. Maybe they had some sort of long-distance listening devices that would hear inside the house, even though I'd done the calculations on all standard parabolics and the math said we were safe.

Or maybe I was paranoid. Dammit, I hated having to trust people I didn't trust.

Arthur's ostensible role in sticking around was to be part of Halliday's protection in the house with me, but he also ended up helping us liaise with the NSA and DHS agents. He was better at talking to them than I was, that was for sure. Whenever I went by them coming or going, I pasted on a scowl and hoped they wouldn't try to speak to me.

Halliday asked for her friend Xiaohu Zhang to be her official NSA contact, especially seeing as how he was a mathematician and all. He turned out to be a bespectacled man with a predilection for sweater vests and perpetually crooked bow ties. He was a genial, soft-spoken guy with a slight pot belly, a ready smile, and stars in his eyes every time he started in on mathematics with Halliday. I sat in the corner and cleaned my guns while they rambled on about her proof and how exciting it would be for the mathematical world once it was finally revealed to the public. Zhang kept asking if she'd written her Abel Prize speech yet.

He also told us the NSA had made no headway on figuring out who had actually stolen the proof, which was slightly worrying. Fortunately, it not only hadn't turned up anywhere, but there'd been no whisper of anyone who might be using her methods. The prospect dangled above us, an anvil waiting to be dropped.

Of course, I thought, Zhang might be lying. I didn't think he had the duplicity—but then, the NSA might be lying to *him*.

Zhang did tell us there was already a mostly-behind-the-scenes revamping of computer security going on across the country. Halliday jumped in on helping with the tail end of it, making sure the concepts in her proof couldn't be used against it in the same fashion, and with giddy relief—well, what passed for giddy with her—seemed to be confident the crisis was averted. All vital national security concerns had quietly swapped encryption protocols with impressive speed, and anything that could lead to drastic economic consequences was slowly being switched

over as well. Whoever had the proof would still have a lot of power once they deciphered it, but the NSA had at least averted the apocalypse. Probably.

Amusingly, the authorities switched from factorization of semiprimes to using Halliday's own work on encryption via prime roots of unity. I supposed it wasn't that ironic for her own work to have come out on top, considering how few people there were in her field. There were whispers in security circles wondering about all the changes, Zhang told us, but the NSA had managed to keep them tamped down enough that the mainstream news media hadn't picked anything up yet, and people tended not to listen to conspiracy theorists. Even when they were right.

After the relief part of it, Halliday had an attack of guilt after Zhang revealed—in his absent, slightly dotty way—just how fast the NSA had been able to mitigate possible disaster. “I should have gone to them right away,” she told Arthur and me that night, leaving her food untouched as we ate dinner over the in-progress proof papers. “I was too afraid. But look how quickly...I was stupid. And selfish.”

“Eat,” said Arthur.

“Yeah, I don't want to have to deal with you fainting,” I said. Arthur shot me a look. “What?”

“Sonya,” he continued, ignoring me, “everyone makes mistakes, right? You know that. None of us was aware of enough to know it was the right call. I ain't told you to do it neither.”

“And I didn't even want Arthur to go to them when you were kidnapped,” I said, tucking in my stew as I spoke. Arthur wasn't a bad cook.

“But *I* should have known,” said Halliday. “This is my world. I should know how it works. I could have talked to Xiaohu, or any other of my friends who consult occasionally. It was too easy to listen to the stories that scared me.”

“Well, there are a lot of them,” I said. “The NSA is scary.”

“Not helping, Russell,” said Arthur.

“Why not? I think you acted perfectly reasonably,” I told Halliday. “I'd recommend hiring me any day over going to the NSA.”

She fixed me with a wry look. “Do not take this the wrong way, Miss Russell, but your approval of my life choices is not the most comforting of notions.”

Right.

“You made a mistake,” Arthur said bracingly, putting a hand on her shoulder. “Humans do that. Okay? Cut yourself a break. Now eat something. Please.”

She finally obeyed, sipping delicately at a spoonful of stew broth. “I understand what you’re saying, but to be perfectly honest with you both—I’m not sure I deserve this deal we have. I handled this wrong from the start.”

“You can have your crisis of confidence after we get your proof done,” I said. I spooned up my last bite of stew and pushed away the empty dishes to pick up her latest papers, the ones she and Zhang had been scribbling on during his visit today. “You’re close on this, but you’re going in circles. Come on, the whole point of the graph theory lemma was so clearly to give you a reducing function for f -bar.”

Halliday dropped her spoon, spattering broth across the pages, and snatched the ones I was holding, her mouth gaping wide. “Yes—of course! How did we not see that!”

“You weren’t thinking?”

She brushed me off and snatched at a pen, but Arthur picked it up first and moved it out of her reach. “Eat, Sonya. The proof will be here.”

“Arthur, no, you don’t understand—I have to get this down—” She pawed around for another writing utensil and started scrawling on the back of one of the proof papers.

Arthur gave up and glared at me. “Russell, no more talking math at meal times. You gals have got to take care of yourselves.”

“What are you talking about?” I asked, as innocently as I knew how. “I ate.”

It took a little over two weeks for Halliday and me to complete the math, and a few more days to smooth it out into something coherent and readable. I kept my contributions limited to heckling and oral explanations so all the handwriting would be hers. Arthur tried to get the NSA to allow Pilar in to typeset the TeX, but the Feds refused to let another civilian have

eyes on the proof, so Halliday did it herself. We worked on a computer with no network connection, printed the proof, and then magnetized the hard drive of the computer.

“You’d think they’d want the digital copy,” I said.

“Think it’s a security thing,” Arthur answered. “Probably don’t want it digital until it’s behind enough sets of closed doors. Too easy for someone to copy it.”

I didn’t really care. This whole fiasco was over—well, over for us. We’d never figured out who’d stolen Halliday’s work in the first place, but the Feds had been very clear that it was their investigation now and that they would look unkindly on anyone stepping into it. Since the imminent danger to both the country and Halliday’s well-being were over, we’d agreed to let it go, which meant we were done. The Lancer and D.J. were still out there somewhere—their bodies hadn’t been found buried in the building we’d blown up—but the Feds had helped us there, too; they’d continued going after the Lancer with the fury of a thousand avenging angels, and last we’d heard Interpol had reported intelligence he was somewhere in Croatia. I wasn’t convinced we’d seen the last of them, as they probably craved some violent vengeance against us if nothing else. But Halliday’s proof was a whole lot less valuable now, so maybe we wouldn’t be worth the trouble.

The afternoon we put on the final touches, Halliday and I sat out on the deck of the safe house, staring at the neatly completed proof stacked between us. I was drinking tequila out of the bottle and appreciating the fact that my various recent injuries had all mostly healed. She had a glass of ginger ale.

“When’s the switchover happening?” I asked. I was exhausted, but something felt...good about finishing this. Complete. Like it had been a job that meant something.

“Xiaohu’s coming by tomorrow morning, and I’ll be passing it off to him.” Halliday smiled. “He was giddy as a schoolboy when he told me they’d cleared him to take custody. I think a promotion might be in his future.”

“He seems like a good guy,” I said.

“Yes. And he reminds me...” She stood and wandered over to the railing. “He reminds me of why we do this. Of how amazing this is, what

we are a part of, what we can build. He reminds me to love it. Sometime between the kidnapping and the government custody I had lost that.”

I stood up and joined her, still suffused with good feeling. “Well, you did it. I...it’s a marvelous result. I don’t think I ever told you that.” I clinked my bottle against her glass. “Congratulations, Professor.”

“It is marvelous, isn’t it?” Her eyes were shining. “Thank you, Miss Russell, for...for giving me this. For everything, but—for this especially.” She huffed a laugh. “Is that wrong, that rebuilding my work was the most important part to me?”

I shrugged. “It’s math, right?”

“It’s math,” she repeated reverently.

We sipped for a moment in silence.

“I wish you would let me add you as an author,” Halliday said, gazing out into the woods. “This will be history, some day, and it’s your work, too.”

“Nice of you,” I said, “but it isn’t. I filled in the gaps, but those were your leaps, every one of them.” I raised the bottle. “To a job well done.”

She didn’t toast, instead speaking very quickly. “Collaborate with me.”

I spewed tequila all down my front, my good feeling evaporating like a popped soap bubble. “*What?*”

“We work well together. Keep collaborating with me.”

I shrank away from her. The cool mountain afternoon was suddenly too hot and close. “What are you talking about? No!”

“I don’t—I don’t understand,” she faltered.

“This isn’t what I do, okay?” I snapped. I backed away from her until I hit the other rail. “It’s fine for you, but it’s not for me. Not ever. No.”

“But why not?” Her voice rose, disturbed and hurt. “I asked Arthur—he said you don’t work, not that he knows of—you don’t publish—why not?”

“Why *not?*” I cried. “Why *would* I?”

She stepped over and literally got in my face. “Because the type of talent you have—not to use it is tragic!”

“I use it!”

“You know what I mean.” Her face tightened, her anger personal. “When I think what you could give—the advancements—I know it’s not a matter of interest; you clearly keep up with the field. If it’s money you need, I can get you a research position—”

“It’s not money,” I said.

“Please.” Her voice cracked on the word. “I’m pleading with you. What you could bring to mathematics—you can’t walk away. You can’t.”

“It’s my life,” I said, slamming down the tequila bottle on the rail. “I sure as hell can.” I turned and pushed off the deck, down the stairs, and away from the house.

CHAPTER 21

PROFESSOR HALLIDAY'S words echoed in my ears all the way back to my current apartment, as if my skull were empty with only her voice rattling around inside.

Collaborate with me. We work well together.

I shook my head, violently, as if that would fling the words out, make me forget what we had just done.

I went inside and sat down at my table. I had some printouts on it, some journal papers I'd been reading before this case started. A lifetime ago.

I picked one up. One of the latest advancements in number theory.

I glanced it over. I'd read to the end of this one already. The final conclusion included questions for future research.

Number theory.

Number theory was easy. *Piece of cake*, I told myself, the claim trembling even in my thoughts.

I looked at the questions, picked up a pen, and turned the sheet of paper over. The blank back stared up at me, ready to envelop me.

I put the pen against the paper. Considered the first question in the future research section.

Do the upper and lower bounds proved here for $g(k)$ hold true for all n ?

I could answer it. I should be able to answer it.

The white page mocked me. The faint outline the black ink on the front showed through: words, formulas, lemmas, equations—ones I hadn't written. Such unassuming text, and suddenly so monumentally unreachable.

I had taken down a global conspiracy using mathematics.

I had survived a sniper shot using mathematics.

For fuck's sake, I had just helped Professor Halliday complete her proof of one of the most fundamental results in modern complexity theory.

I was unbelievably, impossibly good.

The ballpoint pen dug through the page, stabbing a hole in it and indenting and blackening the tabletop beneath.

I could see patterns, build structures out of them. I could compute faster than anyone should be able to. I could connect the fucking dots when someone else laid the insights out in front of me.

But those insights themselves...the ones Halliday had drawn out, the brilliant jumps she had made, the ideas she had thought to use...

The leap of inspiration, the piece of my brain that made me a mathematician instead of a computer, I reached for it, and, and *nothing*. I groped as if for a phantom limb and found myself lost, with no touchstone, no mathematics.

Inspiration isn't supposed to come every second, I reminded myself. Was I being too paranoid? Used to seeing things so fast that I leapt to a conclusion something was wrong if the math took only a little more work?

I knew the answer even as I asked the question. Because I hadn't always been like this, had I? I knew I hadn't. A ghost of memory whispered by; I recalled the feeling of making connections as fast as I could write. I'd had the skill. Had the power.

And now I...didn't. I was broken. And I hadn't even realized it until this moment. I could understand, I could calculate, but I couldn't create. I didn't have the one most important skill that made me a human mathematician instead of...instead of a very slick computer.

My hand shook as I pressed on the pen, as I dug a trench into the table, tearing the paper, and then I flung the pen away from me with so much force it left a black slash on the wall before dropping to the floor. I scooped up the pages in front of me, tearing at them, shredding them. Cast

the crumpled papers away as if they scorched me. My breath heaved. I felt a dizzying vertigo, as if the ground had just opened up and swallowed me into darkness, and I was floating, disoriented. Lost.

Mathematics was who I was. If I didn't have math...then I had nothing.

The papers strewn across my table and floor grew monstrous, mocking. I bolted out of the apartment, down the steps, blindly trying to escape from the brokenness I carried inside me.

It had started to rain, the flat, drenching downpour LA got a handful of times out of the year, and it stuck my clothes and hair to me immediately, waterlogging the cloth against me and plastering it to my skin. The rain fit, somehow, the flood washing me away just as I so desperately felt everything else in me washing away. Dribbling out of me.

Leaving me empty. Desolate.

I didn't know who I was anymore.

I found myself standing in the rain outside Checker's house without remembering how I'd gotten there. The grayness of the sheeting rain combined with the grayness of the evening, but Checker's living room window was a yellow square shining through the shadows; he wasn't in the Hole for once. I trudged up the ramp onto his porch and rang the doorbell. My fingers were numb.

"Cas! Are you all right?"

Checker had swung open the door; he wore a dark green fleece and was backlit by a bright and warm entryway. I stood on the porch, shivering.

"My God, come in—you look like a drowned rat. Come in. Are you okay? There aren't any bad guys chasing you or anything, are there?" He cast a quick and slightly nervous glance at the street behind me as he ushered me inside and shut the door.

I shook my head and stood still. I was dripping all over his floor. That was probably rude.

He touched my arm. "What's going on? Are you okay?"

I kept dripping.

"Hey, um, let me get you a towel—and some clothes—hang on a sec —"

Within seconds he had thrust a thick towel and some folded sweats into my hands and was gently pushing me into the bathroom. “Get cleaned off; shower if you want to—you’re covered in mud—you’re okay, right? I mean physically? You don’t need a first-aid kit or anything?”

“No,” I said.

“Good, good, okay, then, uh, get dry, and I’ll, uh, I’ll make some tea or something, okay? You need anything else?”

“No,” I said, and shut the door.

I took a long shower, the steam scalding my skin raw. I didn’t know why I had come here. I didn’t know what I was doing.

When I came out, wrapped in the warmth of thick, dry clothes, Checker immediately thrust a hot mug into my hands. A half-sweet, half-spicy aroma spiraled up with the steam from the contents.

“It’s cider,” said Checker. “With, uh, some whiskey in it. It looked like you could use some. But if you want it without, I’ve got that, too. And I put some soup on; it’ll be another few minutes, though.”

I’d known Checker over two years and had no idea he was capable of being so domestic. I stood stupidly with the warm mug of cider in my hands.

“Cas.” He tugged gently at my wrist. “Come sit down, okay?”

I followed him into the living room and allowed him to ensconce me on his couch. He levered out of his chair to sit next to me; across from us, a black-and-white Western played on the flat screen, the volume muted. Tall, rugged white men squinted at each other and put meaningful hands on their six-shooters.

I can draw faster than that, I thought. But I couldn’t do what really mattered.

“What happened?” said Checker softly.

I stared down into the cider. The steam coming off it burned my face and made my eyes water. “I think I lost something,” I said.

He waited.

“I don’t know if I can explain it,” I mumbled. “Working with Halliday...I hadn’t realized, before. I can’t...I used to be able to do that.”

“Do what?” asked Checker gently.

“The...the spark.” I wasn’t sure what to call it. “The leap...the inspiration, or intuition, or—I can’t...I can’t do it. I can’t do...math. Not real math. Not the type that counts.” My voice crackled around the edges.

He digested that. I wasn’t sure what I would do if he told me just to keep on, that he knew I could do it, or some bullshit like that. Or, worse, if he told me it wasn’t important, that lots of people couldn’t do it, that this was a minor thing, a nothing thing—because it didn’t *matter* if other people couldn’t; other people had husbands and wives and children and hobbies and passions and *lives*, but mathematics was the only thing I had, the only thing that made me worth anything at all. And the one piece of it that made me a *person*...it was gone.

“You’re sure?” Checker said finally.

“I know I used to be able to, a long time ago.” The admission took effort to force out. “And now I know I...can’t. I’m—I’m damaged, somehow.”

Checker reached over and took one of my hands off the mug to squeeze it in his. “I’m sorry,” he said.

I was sorry, too.

“You don’t have to answer,” he said. “But do you know what—the way you’re talking, what you’re saying, it sounds...it sounds like something happened. To you.”

I squeezed my eyes shut. My memories jumbled up against each other, a chaos of kaleidoscoping emotion. “Yeah,” I said. “Something happened.”

“Do you want to talk about it?”

“No.” That much I was sure of.

“Okay,” he said.

I took a sip of the cider. It was still too hot, but the scalding burn fit my mood. The whiskey spread through my senses, a blessed surcease.

“I wish I could do something,” Checker said, the words low and weighted like it was what he wanted more than anything in the world right now. “I wish I could fix it for you.”

“Me too,” I said. Emotions I didn’t want to have balled up inside me, stifling, strangling.

Checker snaked one arm around me and leaned me into him. I stiffened for a moment and then let him. The sensation was odd, a warring mix of

relief and strangeness, that someone would touch me like that who wasn't trying to hurt me. I leaned into the strangeness, trying to let my mind blank out, to divorce myself from the desolation just for a moment.

Some time later, a faint *ding* sounded from the kitchen. "I'll be right back," Checker murmured. He gave me a squeeze and kissed the top of my head before shifting back to his chair and heading into the kitchen.

Wait.

What?

People didn't make affectionate gestures toward me. I didn't know how to parse one. Didn't know what I was supposed to do in response.

I sat and waited, trying to mull it over, but my brain stalled out against the swamp of depression and self-pity. I finished the cider instead of thinking; it was lukewarm now but still spicy-sweet, the whiskey strong and sharp.

Checker came back after a few minutes, balancing a tray with steaming soup bowls. He slid it to the coffee table and moved to sit next to me again, leaning forward to arrange the food. "Here. You should eat something. It's good, I promise."

"You kissed me," I said. I wasn't sure why I said it, except he'd confused me, and I was too drained, too empty, to try to translate social cues the way I was probably supposed to.

"Sorry?" He looked up, and I could almost see his thoughts rewind. "Oh! I wasn't—sorry. I didn't mean—not that I don't find you attractive, of course, but I wasn't trying to—"

"No, it's okay," I assured him. "Wait. Attractive?"

He looked befuddled. "Well, yes."

I squinted at him. These sorts of revelations were supposed to make you happy or angry or upset or disconcerted or...or something, but I didn't feel anything like that. It didn't matter whether Checker wanted to jump into bed with me, or whatever he might want. Because nothing mattered.

"I didn't mean to make you feel uncomfortable," Checker said earnestly. "It's not like I want to—well, anything. I just meant, you know, in the semi-objective sense of women I would find attractive, being that I'm me, I mean...you're on the list. It's, uh, it's not like I want anything from you."

“I’m not uncomfortable,” I said. “I was just confused.”

“About what?”

“You flirt with everyone,” I pointed out mechanically. “You don’t do it with me.”

His face wrinkled in surprise. “Well, I *did*, when we first met, but you never flirted back. I try not to be a creeper.”

“Oh,” I said.

“Cas?” He touched my arm. I’d never taken note before of how tactile Checker was. The relief-mixed-with-strangeness flooded back, an almost dangerous feeling. Daring me.

“I don’t want anything from you, either,” I said. I slid my hand down so I was touching his, very lightly. It was the strangest sensation in the world. “But I want...to not think for a while. Is that okay? Can we do that?”

He turned his hand under mine, rotating it to interlace our fingers. “Yeah,” he said. “Sure. We can do that.”

We let the soup grow cold on the coffee table.

CHAPTER 22

CHECKER'S BREATH was slow and even beside me, but I stayed staring up into the dark. I hadn't drunk enough to pass out, and right now I wasn't even sure if that would be enough.

Besides, I felt...strange. Not better, not exactly, but less...untethered. Not because of the sex; I didn't think that was the important piece. All I knew was that I felt less desolate, here, with the warmth of another person beside me, a person who cared enough to let me in out of the rain and be... whatever I needed.

Weird.

I didn't realize I'd said the word out loud until Checker stirred next to me. "Weird?" he said sleepily, a touch of humor in his voice. "Well, I've had girls say worse."

I smacked him lightly across the chest. "No, I meant..." I wasn't sure what I had meant. I wasn't even sure what I was feeling, or why, or even if the physical intimacy had been significant. What did I usually feel after sex? I thought back, but the memories were hazy, like mirages that were only there if I saw them out of the corner of my eye. Maybe they weren't even real at all.

"Don't worry about it," murmured Checker, shifting to snug one arm around me under the blanket. His goatee was tickling my shoulder, and he was very warm. And smelled nice, like slightly burned plastic. "The legs thing, I know. It's different."

I could feel myself flushing in the dark, and tried to explain too fast, my sudden discomfort at what he had thought making the words trip over each other. “That’s not what I—that wasn’t even—okay? It’s all weird to me. That’s what I meant. Not you, but, this.” I wasn’t even sure what I meant by “this”—intimacy, friendship, the bizarre idea that someone would be there to catch me when I fell—but I didn’t know how to articulate any of that, so I went with the easiest option. “Sex,” I grumbled at the ceiling. “I don’t remember if I ever—I think this might have been the first time, for me.”

Checker didn’t say anything.

“Christ,” I said. “I didn’t mean to make you uncomfortable.”

“I’m not. I’m just...confused,” he said, and I was acutely and awkwardly aware we were reversing our conversation from the previous night. “What do you mean, you think?”

“It’s one of those things,” I said, already tired of discussing this. “I thought I had, but I can’t pinpoint...you know.”

“No,” he said after a moment. “I don’t.”

“I probably forgot, that’s all,” I mumbled into the pillow.

“You...forgot?” he echoed.

“Yeah.”

He didn’t say anything else, but the silence was too weighty, full of pressure and worry and expectation.

“Look,” I exploded, “It’s not a big deal. Maybe I just got really drunk one night and forgot.”

“You’re incapable of getting that drunk. You’d have to inject it into your veins.”

“Then maybe it was something other than alcohol. Or something. Look, there are a hundred possible explanations. I’m telling you, it’s no big deal.”

“You think someone might have *drugged* you and you say—you say it isn’t a big deal?” Checker shifted, levering himself up on one elbow next to me. “Cas, you’re worrying me. Roofies make you forget; it could’ve been—” He bit down on the sentence.

“Rape?” I supplied. “So what?”

“So *what?*”

“If it was, it’s my business. It’s my life, and I say it’s nothing. Drop it.”

“It is your life, but—Cas, *please.*”

“Oh, come on!” I cried. The exclamation ripped out of me too raw, the emotions from the past twenty-four hours tearing forth in a torrent. “Why are you making such a big deal about this? Haven’t you ever forgotten anything? Like, who was the first person you kissed? What was your first computer? The first guy you ever saw play Doctor Who? See?”

“Charlene Gilligan, an IBM 286 in my foster parents’ basement—and the first actor I ever saw as *the Doctor* was Peter Davison,” said Checker.

I digested that. I hadn’t expected him to be able to answer. “You must have a freakishly good memory.”

“I don’t.”

“Then clearly you have a skewed sense of priorities, if that’s what you’re using your brain space for.” I put as much snideness into the words as I could.

“What do you use yours for, then?” He didn’t sound offended, only a little queer.

“Important stuff.” I pulled away from him, turning over. “Job details. Things I might actually need.”

“And what did you do before retrieval work?” asked Checker, still in that strange-sounding voice.

“Kid stuff, I guess. Let it go.”

“You guess?”

“It was a long time ago,” I growled. “And I told you to drop it.”

“If you don’t want to tell me, I get it,” said Checker. “I do. But just tell me one thing. This thing about you not remembering your first time—that’s not a cover? You really don’t remember?”

I blinked. My emotions were spiraling back down into depression, and I was so *tired*. I didn’t have the energy for this. “I said I don’t remember.”

“So it’s not a cover for, uh, for whatever you did before.”

I snorted. “Don’t be an idiot. If I wanted to have a cover for anything in my past, I’d have a good story; I wouldn’t claim a bad memory.”

“That’s kind of what I thought.” He still sounded funny.

I buried my face in the pillow. “Christ almighty, Checker. I have no idea what the hell you’re talking about.”

“What was your name?” he said. “Before you were Cas Russell?”

I felt as if I had been walking through the dark and had missed a step, even though I was still lying on the bed. The interview with the DHS flashed back to me, Agent Jones aggressive and in my face: *What’s your real name?* “That’s always been my name,” I said.

“I don’t think it was.” Checker’s voice was very soft.

“You’re on crack,” I snapped. “You’re trying to tell me what my name is?”

“Who was it?” said Checker. “Who erased you?”

“Who *what?*”

“Prior to a few years ago, you don’t exist. I’m *good*, Cas. Who erased you?”

“You background checked me?” I squawked.

“Oh, don’t sound so shocked! Of course I background checked you. Arthur comes in with some new person, who works with you-know-who, not to mention I’m *paranoid*, Russell, as you well know; I background check everybody, just like you do! And you don’t exist more than a few years back.” He laughed a little, but it didn’t have much humor in it. “I always wanted to ask you who did it. Someone good, it had to be, to hide it from me—”

“*Nobody* erased me!” I cut in over him. “Or maybe you did to be funny and you forgot, huh? Ever think of that?”

“No, because it’s stupid!”

“You’re calling me stupid now?”

“What—no! Cas, talk to me—”

I tumbled gracelessly off the bed into the narrow space next to it and began angrily gathering up my things. “My childhood just isn’t that interesting. End of story. I—ow!” I cried, barking my shin on something hard and sharp in the dark.

“Lights,” barked Checker. The lights flared brightly for a moment, exploding painfully against my retinas, before Checker cried, “Dim!” and they retreated to a more comfortable grayness, leaving purple splotches

dancing in my vision. “Cas,” he said more quietly, and it almost sounded like pleading. “Just tell me *something*. Something from your childhood. A movie you liked. Your parents’ names. A pet you had. I don’t know. Something. Please.”

“I’m leaving,” I said.

“Something,” he repeated. “Humor me? Please?”

“No. This is dumb.”

“For love of God! Tell me something or I swear I will plague you in person and through every electronic device you own until you do!”

I tried to look at him, but the purple splotches were still floating in front of me, and I could only vaguely see his outline sitting up in bed. I couldn’t figure out why this was so important to him.

I cast back for the type of stupid sentimental thing he was looking for, just to end this conversation forever. It was one of those things that seemed like it should be easy but wasn’t once I started to think about it, as if I’d been told to think of five blue-eyed people off the top of my head. I’d know that I’d met five, or at least seen them in movies, but doing it on the spot?

“Come on,” I said after a moment. “It’s dumb kid stuff. Who cares?”

“Anything,” Checker insisted. “A book you read. A teacher you had. A friend’s name—”

“Yeah, like I had a lot of friends.”

“Then an enemy’s name! Something!”

I paused a moment longer, and then shrugged. “I don’t know. I’ll have to think about it, I guess. Why the hell do you care so much?”

“Because someone erased all records of you, and you don’t remember whether you’ve had sex before, and neither of those things bother you when they should freak you the hell out!”

“What?” The purple splotches were clearing from my vision, and I could see Checker’s face now. He was...upset. Agitated. “I just don’t want to talk about this, okay? Forget I said anything.”

“Forget,” he said bitterly. “Like you have?”

Anger surged up in me, hot and black and unexpected in its intensity. “Just because I don’t remember a few minor details—”

“Cas!” With a grunt, Checker had levered himself forward to the edge of the bed, and was suddenly grabbing me, his grip surprisingly strong. “Listen to yourself! Something is wrong here!”

I shouldered him off. “Nothing is wrong with me!”

“*Yes, there is!* And you should be able to tell that by the fact that you won’t even entertain the possibility! Go ahead. Prove me wrong. You’re a mathematician—prove it, and I won’t say anything ever again.”

“I’m not a mathematician,” I said coldly. “I’m a computationalist at best.”

“Bullshit. Prove me wrong.” I stared at him in shock, the weight of my confession the previous night pressing down on us, but he stared back defiantly, and something in me was insanely glad he still thought of me as a mathematician even after what I had told him.

Even though this was a pointless exercise for me, given that I already knew he was wrong. And could prove it, as soon as I thought of some innocuous, trivial fact that would satisfy his stupid requirement.

“Did you go to an elementary school?” Checker pressed. “High school?”

I grunted.

“Your family? Any siblings?”

I shrugged irritably. “Been too long.”

“Since what?”

“Since I’ve seen them, clearly.”

“Were you very small, then?”

I didn’t answer.

“When did you move to LA?”

“A few years ago. Can we stop now?”

“From where?”

“I’ve lived a bunch of places. They all run together after a while.”

“Like where?”

“Other cities,” I scoffed. “Who remembers names?”

“Cas,” said Checker. His voice was choked. “Listen to yourself. You can’t remember.”

“Stupid stuff,” I agreed.

“No. Anything. Your memory’s gone.”

I almost laughed, the emotion edged with brittleness. “No, it isn’t.” Of all the things that were fucking me up in the head right now—that was ridiculous. I’d know if my memory was gone.

It was Checker’s turn not to say anything.

“I remember things!” The words tore out of me, almost rising to hysteria, Checker’s thrown gauntlet hanging between us. “I remember plenty of things! It’s perfectly normal for the details to fade. That’s not something wrong with me; that’s normal; that’s—I bet you don’t remember *anything* from when you were five. See?”

“My kindergarten teacher’s name was Mrs. Farrow,” said Checker. “The first day of class I tried to convince the other kids to join me in mass rebellion against authority and ended up sitting in the corner for the rest of the day. I also tried eating a yellow crayon. It was not as tasty as it looked.”

I stared at him, shock and fear flooding me, suffocating me.

“My foster parents at the time were named Millie and Bruce,” Checker continued inexorably, “and they had two real children named Claude and Jeannette who were perfectly dull and would tell on me for trying to light things on fire. Bruce eventually had the town fire marshal sit down with me and try to explain that playing with matches was bad. My counter-argument, that fire was spectacularly cool, did not sit well with him, and I got moved soon after that.”

I was still staring. It was the first time Checker had ever told me this much about his childhood. I had thought—I had assumed—that everyone must remember their pasts in the same hazy, disconnected way I did, because that was normal, it had to be, it *had* to be—

But here was Checker’s in technicolor detail.

“I don’t remember everything from when I was five,” he finished softly. “But you always remember something.”

“I...” I tried to think that far back and got the same vague image I always did, of brown people and brick and bright colors, and an indistinct impression of being among many other children in a classroom of some

kind. Those were the only memories I had associated with childhood.

“Stop it,” I mumbled, my lips numb. “Stop...”

“Please. Let me help you look into this. I can help you figure this out.”

“No.”

I wasn't looking at him anymore, but I could feel his confusion.

“What?”

“I said no. Leave it.” My voice shook, but I had no doubts.

“But—”

“Maybe there's a reason my brain doesn't want to remember,” I said.

“My brain's pretty smart, you know.” Smart, and broken, and now starting to stutter wildly in a way I was all too familiar with, stutter and squeal and demand I lock myself in a small dark room and black out—

I tried to make an angry exit, but I wasn't sure I managed it. I didn't look back at Checker to find out.

CHAPTER 23

WHEN I got back to my apartment, I was in my kitchen collecting a blessedly full whiskey bottle to my chest before I could think about it. Then I hesitated. My mind was whirling sickeningly, the numbers dancing around me, mocking edges of emotion that were already raw and red, and Checker's stupid, *stupid* jabs circling round and round in my head, a meaningless litany that was nonetheless somehow driving me mad—and this, this wasn't going to be enough—

I shoved the bottle violently back onto the messy counter and grabbed at the cabinet, tossing things out in a frenzy. I needed to shut my brain off—shut it off shut it off *shut it off*—

Some time later I discovered I was lying on my couch, the world spinning lazily above me, wobbling in silly patterns and making me want to giggle. The math was no longer a smothering, choking mass, instead just pretty little numbers that had gotten dressed up in party outfits to parade around for me.

I did giggle a little.

The next time I woke up I felt a good deal less shiny and happy, and someone was pounding on the apartment door. I tried to cover my head with a pillow, but it was too small, and the pounding wouldn't stop. I stumbled over and dragged the door open.

"Go away," I said to Arthur, half-falling out past him to crash into the opposite side of the hallway. I sat down hard on the floor. The wood of the baseboard was a funny texture. New discovery! I giggled.

“Not a chance,” I heard someone say from above me, and then strong hands were under my arms, lifting me. “Up you get.”

“You’re strong,” I slurred out, but wondered why he was lifting me sideways when gravity was pulling downward. I lurched.

“Jesus, Mary, and Joseph!” The hands caught me before I hit the floor again. “Girl, look at me. What did you take?”

“My medicine,” I said automatically. That was the right answer, wasn’t it?

“Good God,” I heard Arthur say grimly, from somewhere northwest of me. “Let’s get you back lying down.”

I found myself back on my couch covered by a blanket, vaguely aware of Arthur moving around my apartment going through some of my things. He came back just as the shiny was starting to dim a little further. “Need more,” I mumbled. “It should be prettier.”

“You’re not getting any more of anything, sweetheart. Except water.”

I could feel a sob welling up; a tantrum to crown all childish tantrums nucleating in my chest. “But I want the *pretty!*” I insisted.

Arthur didn’t bother responding. Instead, he sat on me and made a phone call while I threw my tantrum. I remembered I was angry at Arthur, so angry—and I let it all tear out, rain down on his head, the most creative profanities I could construct.

It didn’t seem like he heard me. In fact, he was yelling, too—things like what-the-hell-happened and for-such-a-smart-guy-you-can-be-really-dumb-sometimes into the phone. Somewhere in there things got hazy again, and I wasn’t sure when the haziness of reality slipped into the haziness of chaotic dreams, dreams filled with men with guns that turned into needles.

When I woke up with a splitting headache and a stomach that wanted to turn itself inside out and wring itself dry, I was lying on my sofa and Arthur and Checker were in my living room. Arthur handed me a cup of water. “Here. Drink.”

My mouth tasted like socks, and I only got down a sip or two before my insides rebelled and I hastily set the cup down and threw up over the side of the couch, the mess splattering my floor. I decided I felt too sick to worry about it, and spat, trying to focus my eyes.

“Checker,” I observed blurrily, still tasting the socks. “How’d you get up here?”

“Desperate times, Cas,” he said lightly.

“Wait. I’m mad at you,” I remembered in a confused mumble.

“This is an intervention, Miss Russell,” said Arthur, in a more serious tone.

“Sending me to rehab, are you?”

He snorted. “Almost tempted. We’ll time how long it takes you to break out.”

“You don’t have a drug problem,” said Checker.

“Well, no, you do—” corrected Arthur.

“Not a *serious* one,” grumped Checker.

Arthur shot him a look. “Ex-cop here, remember? But I’m fair sure it ain’t nothing you’ll accept help with, and I ain’t think you’re no danger to yourself. Normally. Am I right?”

I sighed. I wanted them to go away. The conversation was too loud, beating in time with the pounding in my skull. “So why are you here, then?” I couldn’t speak quite as forcefully as I wanted to. My stomach was still determined to revolt, and I had to keep it calm.

“Because you’ve lost large chunks of your memory,” said Checker, “And we want to help you look into it.”

My stomach gave an extra savage twist, and I quickly tried to swallow against it. I won the battle, barely. “I said no.”

“We think something might be making you say that,” said Arthur, and I could tell they had rehearsed this. “Can you give us a good reason why not?”

“Or any reason,” put in Checker, with grim blitheness.

“Because first of all, you’re wrong, and second, it’s my life, and I say no.”

“Not good enough,” said Checker.

“Fuck off,” I shot back eloquently.

“This isn’t up for discussion,” said Checker, in his watch-me-set-my-jaw tone. “I’m going to figure out what happened to you. Whether you want to participate is the optional part.”

“That’s a violation of my privacy,” I got out, but there wasn’t all that much vitriol behind it. I was trying to feel violated and betrayed by Checker’s insistence, but it wasn’t quite coming. I was too worn out and sick. “I’m not helping you.”

“Okay,” said Checker. “Then I’ll do it myself.”

“Russell,” said Arthur, in a careful way that suggested he was bracing himself for something, “We’ve seen it before, people who can... manipulate. Who can make you say things, think things, that you wouldn’t otherwise.”

Memory sparked—a slim, Mediterranean-looking woman, features fine and birdlike and serene. Dawna Polk. Pithica. A group of people trained to be so emotionally manipulative that they were, for all intents and purposes, trained psychics. The last time I had seen Dawna, she had rendered me almost catatonic somehow while she escaped, coolly hammering me with a barrage of words and questions I could never quite recall. The memory did not help my nausea. “Nobody messed with my head,” I got out angrily.

“You *idiot*, ” snapped Checker. “Clearly *somebody* did!”

“Checker—” started Arthur, a note of reproach in his voice.

“No, I’m sorry, Arthur! This is like the morons who don’t believe in evolution, even with infinite amounts of evidence thrust under their noses! Cas Russell, you are taking denial to the level of being stupid!”

“Go to hell,” I muttered. Epitome of brilliant comebacks. “And get out of my place.”

“If that’s the way you want it,” said Checker. For some reason, the tone he said it in hurt, twisting up my insides on top of the withdrawal. “Come on, Arthur.” He levered his chair around and moved to the door.

“You, too, Arthur,” I said, loudly and heartlessly, trying to stamp down savagely on that hurt feeling. For some reason I felt as if I had been the one to cause it. “Get out.”

He stood reluctantly. “I’m coming back to check on you in an hour,” he warned. “Drink some water.”

“Thanks, Mom,” I said.

Arthur glanced back at me one last time, his expression worried. Checker didn’t look back at all.

I put the pillow over my face and wrapped my arms around it, half-hoping I would accidentally smother myself, and tried not to think. I considered getting up and rooting around for something to make myself feel better, but Arthur would've cleaned me out. Not that I couldn't get more, but that seemed like so much effort.

He better at least have left the alcohol. I was off contract now; he had to know how fucked I'd be if he hadn't.

My cell phone rang, the jangle loud and piercing and *right by my ear*.

I flailed against the couch cushions and yanked out the phone, prepared to let it fly against the nearest hard surface at exactly the right angle so it would shatter into at least five pieces. As I drew back my arm to throw, I caught the number on the caller ID.

Halliday.

Shit.

I hesitated, the phone still drilling its high-pitched urgency into my hungover brain. I didn't have to answer. I wasn't working for her anymore, technically. The job was over.

Unless, for some reason, it wasn't.

I stabbed at the button to connect the call. "This better be important."

"Xiaohu—when we—he didn't—" Her words crashed against each other.

"Spit it out, Professor. Did Zhang come pick up the proof?"

"Yes, he was just here, but—he wasn't supposed to take it!" she burst out. "He hadn't even notified the NSA that we'd finished. He told me they'd cleared him to take custody, but I just talked to one of the agents and they say they never would have done it that way."

I sat up far too fast; my stomach and head both wanted to burst and blister. The room yawed sideways and I felt so sick I lost sense of reality for a moment. I fought savagely for coherence. "What are you talking about?"

"Xiaohu was supposed to be keeping his superiors updated, but he didn't tell them we completed the proof. And they say they never would have cleared him to be the one to take it. Now he's not returning anyone's calls; they can't find him—"

"Maybe he got stuck in traffic," I said.

“No, are you listening? The other agents, they said they had very specific protocols for this. We should have realized, shouldn’t we? We were too naïve—”

“You think Zhang’s working for the Lancer?” I rubbed my eyes, trying to sync myself with reality.

“No. I know him. He wouldn’t.”

She had far too much faith in people. Zhang was out for himself, just like everyone else. Halliday was right about one thing: I’d been a fool to let us trust him.

I staggered up and looked for my boots. My mouth felt like it was filled with moss. Rotting moss. “When did this all go down? How long ago did they find out?”

“It’s only been a few minutes—I called as soon as I could get away. I think they’re sending people now.”

Geography splayed out in my brain. If Zhang was at his office, the NSA had him surrounded already. But my current location was only minutes from his home address—and considering Los Angeles congestion, that gave me a massive advantage.

Of course, if he was smart he wouldn’t be in either place, but his home might give us evidence of what he was really up to.

“Call Arthur,” I said. “Tell him I’m on the way to Zhang’s house.” Agents were probably listening in on this call, but we’d have to come up with a story for them anyway. Right now I just wanted to get to Zhang first.

I hung up, dragged my sleeve across my tongue—it didn’t help—and slammed out of the apartment.

Dr. Zhang lived in a very nice two-story colonial in suburbia—or, well, Burbank, which was as close as LA got to suburbia. Well-groomed rose bushes lined the walk, and a few kids’ toys were scattered on the lawn. The place even had a freaking white picket fence.

I skidded askew against the curb and raced up to pound on his door. When nobody answered, I kicked it in.

The back door was just closing as I burst into the kitchen. Zhang stood next to the table, the same dotty look of absent-minded professor about him he had always had, his sweater vest and bow tie slightly askew.

“What did you do!” I demanded.

“This is too important,” he said. “The world has to know.”

I dashed to the back door and pulled it open. The acrid scents of smoke and lighter fluid hit my nostrils immediately.

“What!” Zhang sprang to life and pushed past me out into the backyard, where flames were whooshing up from a small fire on the patio. The wind whipped the heat against our faces. An empty silver briefcase was open next to the fire, the lining already charring.

“No!” cried Zhang. “She told me—no!”

He elbowed me aside to run back into the kitchen, then bulldozed back through a moment later with a fire extinguisher. He pulled the chain and let it loose, white powder dousing the flames and blowing back onto his disarrayed academic look.

I stood watching.

Zhang was digging through the powdered remains like a crazed man. He came up with a blackened bit of paper in trembling fingers; it crumbled into ash in his hand. “No...*no*...” he cried, and started to weep.

I came up behind him and crossed my arms. “I think you need to start talking.”

“It’s gone,” he sniffed, wiping a sleeve across his face. White powder stuck to his glasses, coated his collar and hair. “It’s gone...”

“The proof?” I said.

He nodded.

“And what the hell were you trying to do with it? Sell it to the highest bidder?”

Shock exploded on his features. “Never!”

“Then what?”

“Do you not understand what this is? This is—the magnitude of this result—I couldn’t keep it for us. And the way she did it—this could lead to such advancements; the mathematical world—”

Arthur raced out through the back door. “What’s going on?”

“Dr. Zhang was trying to be altruistic,” I said. “He wanted to share the proof with the world, but apparently someone didn’t agree. Who double-crossed you?”

He crumpled, head in his hands. “She said she was a friend of Sonya’s. She said she’d keep the proof safe until encryption protocols were all adjusted, told me my name could be kept out of it—that she’d talk to Sonya and we’d all say it had been stolen—she burned it; why would she burn it? She wanted the result out there as much as I did. More. She believed as I did. She *believed*.”

A horrible certainty was flooding me. “She *who*?”

“Rita Martinez. She’s a theoretician—she’s quite well-known—why would she, why would she tell me...?”

“Shit, the Lancer didn’t steal Professor Halliday’s work,” I said. “Martinez did. It was her all along.”

“But why?” Arthur sounded lost.

I was, too, to be honest. “I have no idea, but I think we need to find out.”

“We need to find Sonya,” said Arthur, pulling out his phone.

“What am I going to do?” Zhang raised his powder-coated face to us, his voice barely above a whisper. “What have I done?”

Arthur considered. “Your bosses, where they think you at?”

“At work—I left myself swiped in—”

“Oh, I’m sure they’re on their way,” I said. “We just happened to be closer. I’m guessing this place will be overrun with federal agents in about, oh, three minutes or so.”

Zhang blinked rapidly, and a few more tears squeezed out of his eyes behind his glasses. “I thought I was—I was trying to do a good thing—the best thing—”

“Shit,” Arthur said softly. I knew what he was thinking: Zhang would be ruined for this. Not just fired—arrested. Thrown in prison for a long, long time.

I wasn’t sure that should bother us, frankly.

Except...I knew it would bother Halliday. And the way Arthur was looking down at Zhang with an intense, arresting sort of expression said he was about to go into full-on savior mode.

Fuck me.

“Whatever we’re doing, it’s got to be now,” I said.

Arthur nodded decisively and grabbed Zhang's elbow, hurrying him back toward the house. "You're coming with us until we get this sorted. You might still go down for it, you follow? But we gotta figure this out."

"I—I don't understand—"

Arthur stopped and stared him in the eyes. "You're a dad, right?"

"Yes—my oldest is thirteen—"

"Then we ain't letting the Feds bury you before we get to the bottom of this thing first, and maybe not even then, you hear? You did a boneheaded stupid thing while trying to do right, and that ain't enough for me to leave three kids without their father."

"Arthur, now meant *now*," I said.

"I—uh—thank you?" managed Zhang. His expression was more hapless fear than gratitude, but Arthur just pressed his lips together and hustled the man off with us.

CHAPTER 24

WE DROVE together; I took the wheel in Arthur's rental car. He didn't bring up his and Checker's conversation with me, for which I was grateful. I'd shoved all of it—my discoveries, Checker's stupid accusations, our fight, everything—into a box in the back of my head to deal with later, neatly compartmentalizing. I was back on the job, and I had to be able to focus.

I swallowed back against my hangover and drove.

The first thing we did was button up Dr. Zhang in one of my bolt holes with Pilar watching him. Then we drove to the safe house.

Arthur hadn't given Halliday any details over the phone—our assumption that the NSA was a third party to her calls meant any details about Martinez would have sent them after her in a heartbeat. Arthur probably wanted to sort everything out first, make sure he was giving the right target to the right people. *If* we could sort it out.

Halliday was waiting for us, practically vibrating with tension. A few DHS agents I didn't know were in the house with her. "Let's take a walk," Arthur said shortly.

One of the agents stood up. "Mr. Tresting. The situation is—"

"Handled," said Arthur. "The proof's contained. I'll give you a full debriefing, but I want to speak to my friend in private first. It won't take long."

"Anything you want to say to her—"

“I’m sorry,” said Arthur. “I really ain’t going to speak to you until I break a few things to Sonya privately first. Faster we do that, faster I tell you everything.”

They looked at each other, clearly disapproving, but then nodded and let us go. Fucking Arthur and his good relationships with people. If I’d tried to say something that aggressively authoritative to them, they would have brought out the handcuffs.

We walked out the back of the house, down through the woods where they surrounded a lake. The Feds’ perimeter wasn’t visible yet, and the house just barely so, through the trees behind us.

“We found out what happened,” said Arthur, when we’d reached the lake. “Most of it.”

“What’s going on?” Halliday’s words had the sound of someone who was back to controlling herself very tightly—and on the edge of not being able to manage it. “Is Xiaohu all right?”

“He’s fine,” Arthur answered. “Well, till the Feds catch him. Don’t think he understands the magnitude of what he did here, stealing a proof from them.”

Halliday stopped walking. “So he did...he stole...” She didn’t seem able to finish.

“Think he thought he was doing something good,” Arthur said gently. “Wanted to release it to the public. Something about the math world needing to know.” He exchanged a glance with me, clearly uneasy about how to bring up Martinez. “Went wrong, though.”

“What happened? Is he all right?”

“Till his bosses catch on, yeah,” said Arthur.

Halliday pressed a hand to her mouth. “He has a family,” she said softly.

“Well, he should’ve thought of that before he stole from the freakin’ NSA,” I said. “Or at least planned his theft a little better.” Bad tradecraft. I didn’t have any sympathy for that.

Arthur shot me a look.

“Do they know?” Halliday asked. “The government, do they know yet?”

“Don’t know what they know,” said Arthur. “But they gonna find out. What did you tell them so far?”

“Not much—just that he took it to give them. But when they said he wasn’t supposed to be the courier, I stopped talking immediately. Arthur, we must be able to do something. Tell them he never made the pick up after all, or that someone stole it from us—I don’t know. But we have to. Arthur, I know his children.”

I’d predicted this would be her reaction, but it was still aggravating. “Why on earth do you want to protect him?” I said. “He betrayed you.”

“He’s such an idealist.” Something like hollow laughter threaded Halliday’s voice. “In retrospect, it makes so much sense, what you say about him wanting to release it. Wanting to do a good thing. Whatever they’ll do to him for this, he doesn’t deserve it.”

“Most people don’t deserve the bad things that happen to them,” I said. “So what? At least in this case he actually did what he’ll be punished for.”

Halliday turned to me with an expression so profoundly tragic I felt like a heel.

“Sonya,” said Arthur. “There’s something else. Might not be able to worry about Zhang right now.”

“Why not? What happened?”

“He tried to give it to someone else. Someone who was gonna release it, she said, after a little time for the crypto geeks to put safeguards in place. That person burned it instead.”

Halliday wasn’t quick on the uptake—or maybe she knew, deep down, but didn’t want to believe. “Who?” she said. “Who did he give it to?”

Arthur rolled his lips together, hesitating. “Your friend. Rita Martinez. She’s in the wind now.”

One of Halliday’s knees buckled. She reached out and caught herself against a tree.

“We think she’s the one stole your work in the first place,” said Arthur, very gently.

“No,” said Halliday. Not as if she was in denial, simply as if she was stating a fact. “It’s not true.”

“Maybe Zhang’s lying,” Arthur allowed.

“Oh, come on, why would he?” I said. “Plus it makes sense from the beginning; Martinez knew she was working on it and—”

Arthur glared daggers at me, and I shut up. Ah. He was trying to make her feel better.

Halliday lowered herself to the ground and sat back against the tree. The dirt and grass were still wet from the recent rain; it soaked through her slacks, but she didn't seem to notice. Arthur crouched down next to her. “Sonya. You okay? Take a minute.”

“And then talk,” I said. “You hired us to get the proof back, and now we know who stole it. Where would she go?”

“But she burned it.” Halliday didn't sound like she was hearing me. “You said she burned it.”

“Our version, yeah. Because she has her own version already,” I pointed out. “She clearly doesn't want anyone else with their hands on it. Now *where would she go?*”

“I don't know.”

“Does she have any family? Other close friends?” I pressed her.

“All the family she has left are still back on the reservation. In New Mexico.”

“Huh,” said Arthur. “Indian reservation, is that outside NSA jurisdiction? Might be a good place for her to run.”

“I'm pretty sure the NSA's jurisdiction is wherever the NSA says their jurisdiction is,” I said. “They're assholes that way. Same with the DHS and whatever secret black ops branch they have on this.”

“She wouldn't go back anyway.” Halliday spoke in a monotone, not making eye contact with us. “Her parents are gone now. There's no one left she's close to. But...why? Why would she do this?”

“I'm more interested in the ‘where’ than the ‘why,’” I said.

“But the why might tell us where,” Arthur said thoughtfully. “Sonya, was she in any financial trouble? Professional trouble? Any sort of motive?”

“No. None. She had tenure; we both did. She'd just gotten two groundbreaking papers accepted for publication. She was still going strong.” She huffed out a breath. “I confess to some envy—the last two papers weren't even in her field, and she'd had no collaborators. Just put

them out, one after the other. She was that smart. She didn't need my work."

I narrowed my eyes at her. Did she still not see it? "Or she stole both of those proofs, too."

"What?" Halliday's head jerked up to look at me. "No, then why wouldn't the authors come forward? If other people wrote them, they'd notice. This isn't a large world."

"Or maybe she bought them," said Arthur.

Halliday opened her mouth, but couldn't seem to think of anything to say.

"Could be plenty of reasons the authors never came forward," Arthur added. He didn't enumerate the others.

"Besides," I said. "Your proof was the big one. It was going to change the world. This was a major breakthrough—you'd go down in history for it. For some people, that's worth stealing for."

Halliday sat for a minute, squinting into the distance. I wasn't sure if she was considering what we'd said or ignoring us until she shook her head. "You're still not making sense, either of you. If Rita was buying proofs, or, God forbid, something worse—she didn't do that in this case."

"Well, she probably knew you well enough that—" I started.

"Let me finish," Halliday said, very firmly. "You're right, she knew me well enough to be certain I never would have agreed. So what was her plan, then? If she released it, I would have spoken out. She had to know that."

"Well, then maybe she was planning something else," said Arthur, his voice heavy.

"What—to kill me?" Halliday pushed away from him. "That's ridiculous. Rita's intelligent, and she had every opportunity to do something despicable. If she'd wanted to dispose of me there are many ways she could have done it that would have left everyone unsuspecting, without ever giving other people the chance to be involved or interested. What you're saying *does not make sense*."

Arthur and I were silent for a minute. Then he said, "Crimes don't always make sense."

“Rita’s would,” insisted Halliday. “You’re asking me why she did it—I don’t know, but I’m telling you, her reason would make sense. If you want what I know of her, that’s it.” She drew her knees up in front of her and laid her hands across them, re-centering herself. “Do you think...is the government going to go after her?”

“Well, yeah,” I said with a heavy dose of sarcasm. “That does seem likely.”

“Russell,” Arthur admonished me, before turning back to his friend. “Sonya, girl. Can you think of a terribly compelling reason why they shouldn’t? She stole your work.”

“I know. But...I don’t want to let them get to her until we have the whole story. Her side of the story. She had to have a reason. She had to.”

Halliday and her faith.

She reached out and placed her hand on Arthur’s arm. “I feel like I have no right to ask this of you. But Xiaohu and Rita, they’re both good people. Good people who might have made some mistakes. You can understand that, can’t you?”

He didn’t say anything.

“We need to help them. Please. The government can’t...please, Arthur.”

Arthur gusted out a sigh.

“Wait a second,” I said. “You commissioned us to get your work back. Now you want to protect the people who stole it?”

Neither of them answered me. It was as if I were invisible.

“All right,” Arthur said finally, to Halliday. “All right. You say they’re good people, I’m gonna believe you. Okay? We’ll see what we can do for Zhang, and do our damndest to get to Martinez first.”

“Thank you,” she said, and I had the distinct feeling there was more passing between them than I knew.

Arthur stood. “Russell, we got work to do.”

I never said yes to anything. “I don’t know what you want from me,” I said. “If you’re planning on spinning a story to the Feds, the last person you want in there is me.”

“Let’s see,” said Arthur to Halliday, as if I hadn’t spoken. “You already told them you gave the proof to Doc Zhang, right? At least, close enough they know that’s what happened?” She nodded. “So, we’ll set it up like he had it stolen from him. We don’t say who. Worst they can prove is he ain’t followed protocol, maybe we say he just wanted to sneak a looksee at it before handing it over, who could blame him? Might be able to swing it so it just gets him fired ’stead of ruining his life. Good?”

“Thank you,” she repeated.

“Don’t thank me yet,” Arthur said grimly. “This is going to be a scramble to set up, and a gamble to make ’em buy. And even if they do, pretty sure Dr. Zhang committed a big crime just by taking it. But the best thing we can do is keep our stories straight. You—” He pointed at Halliday. “You stick exactly to the truth, except for this conversation. You gave the proof to your friend, and you ain’t know nothing else. Same with you, actually,” he said, nodding to me. “You ain’t know nothing ’cept he was supposed to be picking it up. But we’ll try to keep you out of it. Okay, next thing, I’m gonna talk to Zhang. The Feds, they seen his house by now. We can say he brought the proof home to look, just for an hour, and someone came trying to steal it, and he’s the one burned it to keep it out of their hands. Then he skipped out ’cause he felt so guilty for stealing and losing it.”

That was...actually a pretty decent story. It even made Zhang out as some sort of hero, albeit a guilty one.

Of course, it meant more work for us. Goddamn Arthur.

“I’m on Zhang,” continued Arthur. “We’ll try to spin this so it points to the Lancer—that would make sense. Russell, I’m gonna need Checker for a few hours to find out what footprints the professors might’ve left, but after that, you and he get on finding Martinez. For now, we ain’t telling the Feds a lick about her involvement. Got it?”

The last thing I wanted to do right now was work with Checker. I supposed it couldn’t be helped, not unless I turned my back on the whole thing entirely, and as tempting as that sounded...

Goddamn Arthur.

“Arthur,” said Halliday. He looked down at her, and she nodded to him, a deliberate, meaningful gesture.

He nodded back. “We’ll get to the bottom of this, Sonya. Promise.”

CHAPTER 25

ARTHUR WENT inside to give the DHS agents his story, presumably with a big song-and-dance about how he'd wanted to break it to Halliday gently first that her friend Zhang was a thief. I sat out on the deck and waited. They'd probably want to interview me, too, and I planned to say I didn't know a damn thing.

He took a long time telling it—or maybe they were taking a long time asking him questions, or he was taking a long time refusing to tell them where Zhang was, if he'd even revealed he knew where Zhang was. I wasn't sure which way he was playing it, and I didn't particularly care. Arthur could take care of himself when it came to dealing with the Feds. He was the one who'd wanted them in on this in the first place, anyway.

After a while, my feet started to itch. Literally itch, the soles of my feet, as if I'd stepped on poison ivy. I blamed it on being in a house with the DHS. It had been easier to ignore their presence when they'd stayed on their perimeter...why I had agreed to come back here with Arthur, I couldn't fathom.

I tried to sit and not think about things. Now that I was at a lull, everything I'd compartmentalized was banging on the lid of its box, demanding to be let out. Especially given that I had to go and work with Checker after this—work with him to try to track down and protect the woman who had stolen the proof I'd been hired to look for. I almost laughed. The world had turned upside down.

My feet itched.

I'd thought this job was over. I'd thought I could safely ignore Checker until I decided to hire him again. Maybe I would've taken some quality time off first and made friends with some dangerously high levels of narcotics. I usually tried to stay working instead, but who said I had to? I knew enough math not to OD.

Would flirting with the lethality line really be so bad anyway? I imagined Arthur finding me cold in a pool of my own vomit, and got a perverse sting of pleasure out of the image. I could blame Checker for driving me to it, him and his insistent, pestering, *wrong* questions.

Ow, my feet. I stood up and started pacing around the deck.

Besides, eternal oblivion would mean I'd never have to think about the fact that the *math*—

I banged off the deck and walked around the house, skirting the agents in the living room still having their sit-down with Arthur and Halliday, avoiding their certain demands for a statement from me, too. They'd want to keep me under their eyes until they had Zhang back, but my feet and I weren't about to allow that to happen.

I stole Arthur's car—he'd be pissed; he had to go prep Zhang once the Feds let him loose, and needing a ride from them first would make things more difficult, but I didn't care. At the perimeter, I got very, very lucky: the agents in the house hadn't known I was leaving, so hadn't told the agents downhill to stop me, and they were used to my face moving in and out of the safe house. They waved me through.

I'd claim ignorance later. *No idea you wanted me to stay and give a statement about the biggest information theft since the Rosenbergs. No sir, no ma'am, no idea at all.*

The sun was setting, suffusing the city in soft twilight. Driving through the mountains dipped me into deep shadow before catapulting me back into the last rays of the day. It would have been pretty, if I'd been in a mindset to care about such things.

I didn't know where I was going till I'd gotten there.

A graveyard.

My feet had stopped itching.

I turned off the car and sat for a moment. What the hell was going on?

The night was dark and quiet.

I was supposed to be on a job still. I had to wait until Arthur did his thing and then work with Checker on finding Martinez. And somewhere in there give another statement to the DHS. And probably help Halliday rewrite the proof again, unless after doing the thing twice she now had it memorized.

What the hell was I doing at a graveyard?

I got out of Arthur's car and slammed the door. The gate to the cemetery was locked, but that was no problem. A couple of force vectors had me over the iron fence and landing on the wet grass inside.

A sprinkler came on in my face. Of course. LA didn't exactly have dew, and even though it had rained the night before, the sun would've burned all the residual moisture off an open lawn like this one.

A lawn. In a graveyard.

I tumbled away from the spray, shivering, and regained my footing on one of the asphalt paths leading through the headstones.

Why am I here?

I thought about going back to the car, but when I tried to turn back to the gate, my feet felt mired in cement, and something in me clenched. My throat closed. I crouched for a moment, hands on my knees, taking small sips of air through my mouth.

Jesus Christ.

I stood back up and took a cautious step into the graveyard, and the feeling lightened.

I stopped again.

What the *fuck*. Something was messing with me. I didn't like being messed with, and I sure as hell wasn't going to listen to it.

I sat down on the path. The asphalt was damp.

The only person who'd been able to get my mind to...*do* things...this way was Dawna Polk. I shivered, the feel of her invading tendrils a visceral echo in my brain, even years later. But she'd been seamless, hadn't she? Most of the time I hadn't even been able to tell when I was doing what she wanted. To be perfectly honest with myself, I still didn't fully know what she'd made me do and what decisions I'd made myself. I was pretty sure I'd never know.

What was happening now?

I could force myself out of here if I wanted. Right? I was sure I could. But if I did, I'd never figure out why my brain—or someone else—wanted me to be here.

Unless that was a rationalization. Unless that was the weird psychic command's way of forcing me to keep going. Unless someone, Dawna Polk or someone like her, was counting on me thinking exactly that way...

Shit.

Why would Dawna Polk or anyone else want me to randomly come to a graveyard?

I sat for a while longer.

In the end, it wasn't a choice. I had to figure out where this feeling was leading me, whether or not whoever had set this up was counting on that. I stood up and walked down the path. My gun was in my hand.

The curving asphalt sloped down between the well-tended plots, a river of ink between the white bones of the gravestones. I followed it down into a wooded area and then up a hill that was topped with an ornate round building.

I stood staring at it. I had to go inside.

Fortunately, that was easy.

The freshly-broken door banged behind me as I walked in. The building was filled with walls of plaques—small squares with carved names on them that stacked on top of each other, chasing each other up into the darkness. Cover stones for cremated remains, I realized, the columns of stone tablets heavy with the history of the dead.

I stepped carefully between the walls of memory and time. Why had I come here?

The names rose up over each other, one after another. Pierre Boswell. Leticia Cooper. Adrian Clark Lopez. None of them meant anything.

More and more and more. Cecil James Rosen. Kate Ouyang. Nanette Marie Wyman.

Cassandra Russell.

I stopped.

Stared.

What. The. Fuck.

There was a plaque with my name on it and presumably there was an urn full of ashes behind that plaque and *why the hell* was there a stone cover here with my name on it?

Maybe it was a different Cassandra Russell.

The dates of birth and death were years only. One almost a quarter of a century previous—that fit, at least roughly. The other only a few years ago.

Before I had considered it, I had grabbed one of the stanchions attached to some velvet rope barriers, dragging it forward so the rest of its fellows collapsed to the floor behind it in a cacophony, and bashed the base of it into the stone like a battering ram.

The *crack* echoed through the building, off all the other quiet stone tablets. I smashed the stanchion into my name again and again, until the stone cracked and crumbled, until the fissures spread out in spider webs across neighboring cover stones. Then I threw the impromptu mallet to the floor and dug at the pieces, scrabbled at them until my fingers bled, tearing them out of the way until I could see inside.

The urn set in the dimness was a simple metal one, unadorned. I yanked it out and swept off the top.

It was empty.

No. Not empty. I'd expected ashes—expected human ashes, behind a cover stone with my name on it in a graveyard some unconscious command had driven me to, morbidly expected to be holding what purported to be my own remains. But the inside of the urn was clean and ash-free, still new and shiny, with only a folded piece of paper at the bottom.

I shook it out. Unfolded it. My hands were shaking.

I read it. It wasn't long.

Eight words. Ten, if you counted my signature.

I stumbled back out into the night. I'd barely remembered to wipe my prints from the stanchion and the urn. I left the rest of the evidence of my crime scattered across the polished stone floor under the eyes of all the ashy dead.

The note rang through my head, echoing off the insides of my skull, over and over and over again:

Do not try to remember under any circumstances.

CHAPTER 26

DO NOT try to remember under any circumstances.

The words circled, chanting, a repeating loop until they lost all meaning and became nonsense syllables, a never-ending, mocking litany.

Eight words. *Do not try to remember under any circumstances.*

Eight ugly, meaningless, mind-fucking words.

The slashing, slanting handwriting had been undoubtedly and mathematically my own, with my signature underneath. I didn't remember writing the note. Didn't remember hiding it. Didn't remember why I would have wanted to.

Do not try to remember under any circumstances.

I only knew that my brain had been right not to want to remember. I had been right, and here was the proof.

I didn't text Checker to tell him I was coming. Instead, I busted into the Hole hard enough that the door banged against the computer towers behind it, the metal bruising the paint.

"Cas," Checker said coldly, sitting back from his keyboard and crossing his arms, a set look on his face.

For some reason I hadn't expected *him* to be upset with *me*. I'd expected him still to be in irritating pleading mode about looking into my past, worried and pestering. I was the one with the righteous anger about how he dared violate my privacy and my life; he was the one ignoring my feelings—right?

I suddenly remembered how he'd left my place earlier. How stiff he'd sounded.

How much that had hurt, for some reason I couldn't explain.

The solid wall of fury I'd built up against him wavered.

I pulled out the note from my jacket pocket and threw it on one of his keyboards. "Here."

He made no move to pick it up. "What is that?"

"A note. One I found, addressed to me." Sort of.

He reached over and unfolded the paper. Read it. Looked back at me.

"I hope that's enough to convince you to stop your little crusade," I said snidely.

His eyes narrowed, studying me.

"What?" I demanded.

"I'm trying to decide whether I'm a good enough person not to say 'I told you so,'" he said. "No, apparently not. I told you so."

"Told me what, jackass?"

A slight frown appeared between his eyebrows. "I told you you'd lost your memory, and you didn't believe me. You're really messed up in the head about this, Cas."

My thoughts screeched to a halt. I had gone from vehement, thorough denial to "Yeah, somehow my past is gone, but *nobody* is to look into it" without noticing. Something *was* wrong with me.

But it was something I obviously didn't want to change.

"Well, apparently my brain knew enough to try to keep you from looking," I snapped, trying to get back to a level of dignified fury at him. "Sounds like there's a reason for me not to look. I respect my subconscious for protecting that."

Checker was staring at me as if I had just announced the speed of light would henceforth be sixty miles per hour. "How can you say that?" he cried. "This is *you*, Cas! When is not knowing *ever* better than knowing?"

"This time," I said. "You can consider me fully informed now. And I'm telling you—"

His phone buzzed. "It's Arthur." He picked up, leaving my rage whirling impotently. "What's going on?... Okay, yeah... Yeah, of course."

He glanced up at me. “She’s here, actually.”

“Is he done making nicey-nice with the Feds?” I asked.

Checker ignored me. “Yeah, got it. I’ll let her know.” He hung up. “He says you should fill me in, presumably so he’s not talking where the NSA can potentially listen in on the cellular network, and then you need to get your ass back there and give a statement to the DHS before they decide you’re worthy of suspicion. What the hell is going on?”

I took a breath. Jesus, what was wrong with me? I was supposed to be working. I’d never let my personal problems bleed into a job before. Never let...

“Cas.” Checker reached out tentatively to touch the back of my hand. “We’ll figure things out, okay? Let’s table this for now and get whatever the government people want sorted before they bust in here looking for you. Okay? Now what’s happened?”

I forced everything back in its compartmentalized box, ignoring the edges and corners that stuck out jaggedly and jammed against the lid I tried to slam on them, and gave Checker the rundown of the past few hours. He searched for any security footage around Zhang’s house immediately, but there was no sign of Dr. Martinez. Either she’d been smart or she’d been lucky—either way, it made things easier for Arthur and his story.

“They’re probably going to drill you on the timeline,” said Checker. “To make sure you and Arthur and Professor Sonya all match. Make sure you’re clear on any time you had a phone call with anyone and on when you met up with Arthur, and on whatever you might have witnessed. I’ll help you. Cas?”

“Yeah.” I pulled my jacket tighter around me. My clothes were still wet from the sprinklers. “Yeah. Okay.”



ARTHUR’S STORY worked—well, at least insofar as the Feds eventually decided I didn’t know anything of value. They arrested Dr. Zhang, but Arthur had gotten the party line to him before turning him over, and he stuck to that story like gangbusters. The mess quickly evolved into a staring match between Halliday and the Feds, with her refusing to rewrite

her proof *again* unless they let him off, and them disinclined to agree this time.

I didn't care. I stayed as far away from the safe house as possible.

I thought about walking off this endless job entirely—quitting, letting Arthur keep looking into Martinez on his own if he wanted to bend over backward for Halliday. She didn't want the damn proof back anyway, and finding someone only to demand an explanation and then possibly help hide her from the federal government—pro bono, no less—sounded like the most pointless commission ever. But every time I thought about quitting, a nudge in my brain reminded me exactly what would happen the moment I stopped working.

This wasn't going to be like most spans of unemployment, which I dreaded only for their unfocused, alcohol-soaked monotony. This time...

This time, I was afraid. Afraid of what would happen once I lost the focus of a job. Afraid of what my own brain would do.

I kept working.

Checker and I had fallen into a fragile truce; we kept our conversations strictly to the case and never strayed off it. But the days stretched into weeks with no sign of Martinez—it was as if she'd disappeared off the face of the earth. I settled into a cycle of working myself to exhaustion with Checker in the Hole and then dropping into sleep on his couch when my muscles wouldn't support me anymore. The extreme fatigue didn't stop the nightmares, which, if anything, had worsened—cluttered with dangerous silhouettes and a horrible sense of urgency and failure, and a dark man I didn't recognize who appeared over and over to plead: *Stop, Cassandra, stop, you have to stop.*

It wasn't restful.

Arthur eventually felt safe enough to search Martinez's apartment and office. He brought me whatever of her work he could find—it wasn't much, and it only took me a few glances through to see it was all old notes, research that had gone circular. Any true breakthroughs we found were ones Martinez had already published.

"Looks like she had stuff missing," Arthur said, standing behind me at Checker's kitchen table where we'd spread out her notes. "Maybe she took the current stuff with her."

“Maybe she’s an old, washed-up mathematician who can’t do her own research anymore, so she started stealing other people’s,” I said, leafing through a stack of clearly recreational notebooks. Martinez had apparently enjoyed playing cryptographic games with people—long strings of pattern matching broke down into keys pages later, and she had one notebook of zany code ideas and another filled with sheets of letters. I strongly suspected that last one was a booklet of one-time pads, cryptographic keys of perfect security to be shared between only two people.

Arthur watched as I flipped. After a few minutes he dug into his pocket and held out a sheet of white paper that had been folded so many times it had been creased into a tiny square. “Did also find this on the table. It’s a note to Sonya.”

I unfolded it. Martinez’s handwriting was cramped and meandering; she didn’t stay to horizontal lines but wrote in slanting angles and curled around the edges of the paper. *My dear Sonya*, the note began. *I have done a terrible thing...I destroyed everything you have worked for. The world is dust, I made mathematics dust, your mathematics, our mathematics...I wish I knew whether you could forgive me. I do not know if I will be able to forgive myself. ‘Forgiveness’ is such an emotional term, is it not? When I say I do not know if I will be able to forgive myself, I mean that in the most literal terms, as I do not know if ‘forgiveness’ is the right word: I am lacking definitions, and I find myself lost. But I digress...perhaps I can still apologize in the absence of fault, that I broke your world. I am sorry.*

The note rambled on in much the same vein, without paragraph breaks, until it ran itself up against the bottom corner of the page. There it was signed, *With love, also ill-defined but here applicable by hypothesis, Rita.*

“Can’t make head or tails of most of it, but sounds like she’s sorry,” said Arthur. “You think she ain’t mean to do nothing with Sonya’s proof after all?”

“Or she already did it, and that’s why she’s apologizing,” I pointed out. “It could be we just haven’t seen the fallout yet.”

He sighed heavily and folded the note back up to tuck in a pocket. “I’ll bring it to Sonya.” He turned to go, then came back and leaned on the table. “Do me a favor?”

“I thought I was already doing you one,” I said, not entirely without bitterness. “Isn’t this whole job a favor?”

He huffed out a breath. “Talk to Checker?”

Fury clawed up in me, shockingly hot, clogging my head until my scalp prickled with it.

Arthur twitched back. “Not about that, Russell. Not talking about you. I swear.”

I clamped my jaw down on what I had been about to say. “What, then?” I growled through my teeth.

Arthur hesitated, his fingers pressing against the laminated pine of the tabletop. “This thing with the Lancer. Was hard on him.”

“It was hard on *him*?” I repeated. “Excuse me, was he shot at and locked up and also almost blown to pieces three separate times?”

“He could use a friend, ’s all I’m saying.” He made a vague gesture and headed out the door.

I turned and leaned my head against the wall. Arthur had too high expectations of me, as always. I wasn’t in any condition to be a friend to anyone. I’d *never* been very good at being a friend to anyone.

Scraps of memory sparked from the past few weeks. Checker updating me on Interpol’s reports. Checker asking oblique questions about the explosives lab I’d seen. Checker telling me he’d checked and that the Lancer had submitted dozens of fallacious proofs of the P versus NP problem—all with different conclusions—to various places, thus confirming his obsession.

I’d figured the updates were just because he was curious, or keeping tabs for us, as he did. Or, hell, I hadn’t figured at all—I hadn’t even thought about it.

Fuck. I pushed off the wall and went out to the Hole.

“Hey, Cas.” Checker had dark circles under his eyes, and his hair was shaggy and spiky with sweat. I hadn’t noticed before now, but he’d been matching me hour for hour in our push to find Martinez. And it wasn’t like I was getting a healthy amount of sleep.

I glanced over his shoulder, and he blanked the screen, asking, “What’d Arthur say?”

“Eastern Europe.” I responded to what I’d seen him looking at instead of the question. “There’s no reason to think Martinez is there. Arthur’s right; you’re still looking for the Lancer.”

He was silent for a moment. “So what if I am? He’s dangerous. He very well might come after you and Professor Sonya again.”

Far too slowly, shreds of a conversation with Pilar came back to me. It felt as if I was dredging them up from a lifetime ago. “The Lancer,” I said. “Or...the little guy blowing up all the buildings. D.J. You went up against them before?”

Checker’s hand froze on his mouse. “Who?”

“The Lancer had a pyro expert. Short, black, rotund, way too excited about dynamite. Someone you know?”

Checker still hadn’t moved. “You didn’t tell me.”

“It, uh, it slipped my mind.” I swallowed. Guilt nibbled at me. I had the distinct impression Checker had tried to say something to me about this before, and Pilar certainly had, and I...well, it somehow never occurred to me that I should try to be a friend *back*. “Do you need a hand? We’re not making much headway on Martinez; if you want to—”

Checker moved his hands too quickly, and the keyboard banged against the desktop. “Did Arthur put you up to this?”

“What? No!” I rewound what I had already let slip. “Well, he said—”

“*God*, typical.” He took off his glasses and rubbed his eyes. “Arthur and his goddamn need to fix everything.”

I was confused. And stung. “If you need help—”

“Arthur thinks if we all share and bond we’ll end up singing kumbaya and it will all be hunky-dory,” Checker interrupted loudly. He was staring at his hands, not looking at me. “Cas, I don’t know who you are, and that wouldn’t be such a problem, except *you* don’t know who you are, and that scares the ever-living shit out of me.”

I took a step back.

“Something happened to you, and we have no idea what, or—for all we know you could be a ticking time bomb. We have no idea whether—”

“That’s not fair,” I said. “You can’t tell me you know every little thing that has ever affected you—and if we’re talking about Pithica, Arthur was just as much—”

“I’m not done! This isn’t about me being afraid for me, or for Arthur, or for anyone else, even though God knows I am. I’m afraid for *you*, Cas.

Can you understand that? At all? You can't ask me to be friends with you and watch you ignore this!"

"Who said you have to?" The words were out before I could think about them, ugly and saw-toothed. "If you don't like being friends with me, fine. No one's forcing you."

"Oh, fuck you, Cas." He sounded bitter and frayed and exhausted. "Do you even know why you can do what you do? You are *not possible*. And you can't remember why, or how you ended up here, or if there's any sort of reason tangled up with you shooting people without asking questions or having a drug and alcohol dependence Bane would envy—"

"If you have a problem with the way I do things—"

"*You* should have a problem with the way you do things! Or at least with the fact that you have no idea why you do them! What are you going to do, hop from job to job and grab for more dangerous fixes until you get killed doing one or the other? Is that your goal in life?"

My fists were clenched so hard my fingernails stabbed into my palms. "Who asked you? Maybe I like my life just the way it is!"

"And maybe whatever made you lose your memory has something to do with why you can't do math anymore!"

Everything stopped. The retort I had been about to spit curdled and choked me. Checker's words hung in the air, echoing.

He took a deep breath, straightening and blinking rapidly as if he was only just hearing what he'd said. But he set his jaw and let the words stand, meeting my eyes defiantly.

"What did you say?" I whispered finally. Dangerously.

"I'm sorry," he said. "I'm sorry. But—"

I didn't wait to hear the rest of it. I banged out of the Hole. My tires squealed against the asphalt as I peeled away.

CHAPTER 27

EVERYTHING WAS wrong. Crumbling. Disintegrating.

Enough emotion welled up to swallow me, drown me. This job was nothing, my life was nothing...I was nothing. A speck of dust in a hurricane. Powerless.

We couldn't find Martinez, and we didn't even know why she had stolen the proof in the first place. I was mathematically and mentally broken, and to top it off I couldn't even finish one goddamn commission and track down one seventy-year-old woman. And Checker...what Checker had said...

I couldn't have cared less about my memory. My brain shied away from it. Not remembering was just *fine* with me.

The math, though. The math was everything.

If only I could fix that, then nothing else would matter. Not the two-decade long blank spot in my head, not the fact that I was failing so miserably in my work, not that fact that I'd left myself a note in a freakin' graveyard like some kind of sadistically creepy fortune-teller...not the fact that my so-called friends only seemed to give a damn about me as suited their own needs.

Not the fact that *something* in my head had prevented me from even noticing how crippled I was until the work with Halliday.

Fuck. *Just fix the math*—it all sounded so simple, when I put it like that. So simple, for something so fundamentally unattainable. I might as well wish myself to Mars.

Mars I'd have a better chance at. After all, I could do the fucking math.

I drove around the city for a while with an aimless vengeance, going in circles as if I were on a mission to wear out the car. I ran out of gas, refilled the tank, and kept going.

Where was Martinez? That was the only problem I seemed to have any shot at solving right now. The only thing I might not be useless at, even though I'd had less than zero success at it so far.

I drove to her condo.

I didn't know why I was here. Arthur was far more observant than I was; I wasn't going to find anything of relevance that he hadn't. I broke in and walked back through the rooms, looking for something, anything, that would give me a clue as to where she had run to.

I passed by her shelves in the living room, running my hand along the dust fronting the empty spaces. She'd denied anything was missing, but she'd clearly been lying. Why? What did that mean?

I had no idea.

I let myself out the back door. The building had a small paved area behind it, the plants in proscribed plots around the cement almost making it a backyard. There was a high fence that gave it a false sense of privacy and solitude, some lawn furniture, and a portable fire pit in the corner of the patio. It was all pleasant and well-groomed and totally generic. I turned to go back inside.

"Are you a friend of Rita's?"

A little old man had appeared. A permanent stoop bent him over his cane, and he had scraggly white hair and a face that was more liver spots than skin. He leaned on the cane as he took a shuffling step toward me.

"Yeah," I said, and made to move past him.

"She in some sort of trouble?"

"No," I said automatically, and then paused. "Why would you say that?"

"Well, 'cause those government people were here asking about her. When the other lady got snatched. I didn't tell them nothin'." He grinned at me. Half his teeth were missing, and the other half were yellow. "Are you her daughter? She never talked about family. Painful, it was. I could tell. I think the government murdered them."

“Why would you think that?”

“Because I don’t trust them. They watch us, you know.”

Well, yeah, but I still thought it highly unlikely the government had randomly murdered Martinez’s family. “I’m not her daughter,” I said. “I’m just a friend.”

“Oh,” he said. “I have such *respect* for her people, you know. So in tune with nature all the time.”

I wondered what Martinez would have thought of *that*. To be fair, I supposed mathematics was the greatest natural law of all.

“The government doesn’t like her kind. I think that’s why she was in trouble. Maybe why she burned everything.”

“Wait, what?” I said, my brain latching onto the one cogent piece of information. “She burned everything? What do you mean?”

He poked his cane at the fire pit in the corner of the patio. “Night after night. I watched her do it. I thought, something’s gone wrong, good for you, you burn that evidence, you show them how it’s done. Are you her daughter?”

“No,” I said again, and then wished I’d lied. “I’m, uh, a really good friend. When was this?”

“Last week? Two weeks ago? Or was it longer...I get confused sometimes. What kind of trouble is she in?”

“Big trouble,” I said absently, heading toward the fire pit. “Do you know what she was burning?”

“Papers.” He coughed mightily, wheezing. “I asked her once, she said it was her life’s work. She must have been in some mighty big trouble.”

Martinez had burned her own work, too? Or something else?

I crouched by the fire pit and poked at the ashes. They were cool and crumbled at my touch. I only found a few edges of paper that were even partially legible. Both looked like mathematical language—bits of Greek letters and brackets and the words “for every” and “there exists a unique.” Definitely math. In Martinez’s handwriting.

Why would she have burned her own work?

“Did she say why she was doing it?” I asked.

Martinez's neighbor limped creakily to my side and looked over my shoulder. "She said it was too dangerous. She said it would, uh. She said it would 'break the world.' I said we'd already done a damn good job of that, what with the global warming and the economy and the aliens putting chips in our heads. She said no, this was different, that she was saving everybody."

"Saving everybody from what?" If she'd burned Halliday's proof with the same sentiments—maybe she thought someone nefarious *would* get a hold of it, inevitably, and that person would take down the whole economy. Maybe she thought the NSA having it would be evil enough. Could she have discovered a similar proof simultaneously with Halliday and burned that as well, burned everything?

"She told me it was her greatest desire, and it ruined her life," said the old man. "She was lonely, I think. Her life was her work. Her work, her life. Then it made the world ugly, she said, and I think it broke her."

It took me a while to untangle that statement, and when I did, it didn't ring true. If Martinez had discovered the same factoring shortcut Halliday had, she should have been ecstatic, even if she ultimately decided to keep it to herself. Something wasn't adding up.

I poked again at the ashes, frustrated. "Dammit."

"I took a piece," rambled on the old man. "She kept saying it was the end of the world, and I wanted to hedge my bets, you know. But I couldn't make a lick of sense of it. I think maybe she'd gone round the twist. Poor woman."

I stood up so fast I almost knocked the fire pit over. "You took some? Where is it?"

"You're her daughter, right? Not with the government?"

"I'm not with the government," I said. "I swear."

"They're spying on us, you know."

"Yes," I said ironically. "I know. Where's the stuff you took? Do you still have it?"

"I still got it." He squinted at me with rheumy eyes, thumping his cane against one leg. "I give it to you, you have to promise to visit her more. Rita never had any family come. You owe her that."

"Sure," I said, giving up.

“And you gotta explain it to me.”

“Explain?”

“Yeah. Why she kept saying it was the end. We already got earthquakes and police raids and all those dumb nuts in Washington mucking around printing money, and now there’s these papers that will collapse our country, I want to know why.”

“Okay,” I said. “It’s a deal.”

He sniffed like he had won. Then he turned and started shuffling back toward the building. “Come on, then.”

He was so slow I had to resist the urge to pick him up and throw him over my shoulder, but finally his fumbling steps came to the back door of the ground-floor condo, and he negotiated his key ring with shaky hands.

I followed him into a dim apartment only to be confronted with a hoarder’s paradise. Stacks of books and magazines climbed in threatening towers to the ceiling, and all manner of junk was crammed in at odd angles, from broken televisions to piles of clothing to at least two old bicycles. There were also mountains of bottled water, loose and in flats, and a row of five-gallon gasoline jugs behind a jumble of model rockets and bird cages. I was surprised the condo hadn’t broken apart at the seams.

“It’s here somewhere,” said the old man. He started poking through the piles.

I heaved a sigh and went to help, digging through clouds of old receipts and moving crusty paint cans to search for anything vaguely mathematical-looking, and trying not to breathe through my nose. This place was probably a health hazard—one that needed a card catalogue to find anything.

Forty-three minutes later, the old man was still mumbling, “I know it’s here somewhere...my eyes aren’t what they once were...” and I was starting to wonder if he’d put me on. Still, there was no way I was going to leave. This was the closest thing to a lead we’d had on this, and if I had to stay here for a week and dig through every last stale piece of trash in the place, I was going to do it.

Then I picked up a copy of *National Geographic* from the 1970s and saw something underneath.

The pages were crumpled up and crammed against an old-school boom box. I picked them up and smoothed them out. I recognized Martinez's dense script from the note she'd left for Halliday.

I read them. Then I read them again.

Holy shit. I knew why she thought she'd broken the world.

Because...she had.

She had.

I moved toward the door in a daze.

"Are you leaving?" asked the old man. He sounded sad. "You could stay for dinner. I have the kind in the little trays."

"I have to go," I got out.

"We didn't find your mother's notes," he said. He turned his head from side to side, lost. "I know they were here somewhere. She said the end was coming, you know."

She had been right.

He'd better stock up on more of those dinners with the trays. I didn't tell him that. I didn't say anything. I just let myself out.

Once on the street, my legs went limp and I sat down hard on the curb. Martinez hadn't found a factoring proof. She'd found something so much more explosive, so much more deadly.

She'd proven the Holy Grail of mathematics. The impossible dream. She'd solved the P versus NP problem, and she'd proven them equal.

CHAPTER 28

I DIDN'T have enough of her notes to see how she'd done it. But there was enough context around the lemmas, enough explanation in her cramped handwriting, to know something of what she'd been doing. She'd been building a polynomial-time algorithm for 3-SAT.

She'd been right: this would break the world. Rend it in two and shatter humanity in the upheaval. Civilization would never be the same... if it even survived.

I sat on the curb for a long time. Everything around me—the cool evening air, the slight breeze, the deepening twilight, and the math, especially the math—felt different. It wasn't, of course—except it was, because this so fundamentally changed our understanding of the universe that nothing ever *could* be the same.

Finally I steadied myself. Stood up. Went to the car. Drove to Halliday's safe house. The cars passed around me on the freeway like it was a normal fucking day.

Arthur answered the door. "I need to talk to Professor Halliday," I said. "And to you, too. Let's go for a walk."

"Course," Arthur said. "I'll get her." He disappeared for a minute and came back with Halliday, who grabbed a coat from next to the door and shrugged into it.

We walked down by the lake. The night had deepened enough to make it hard to see each other. I pulled out the bug scanner that had become attached to my hip and pressed a button; it flashed green.

“What’s going on?” said Arthur. “Is everything all right?”

“I found out Martinez’s reason.” My tongue felt thick in my mouth. I didn’t know where to start.

“What is it, Russell?” Arthur prompted, when I hadn’t said anything. He sounded concerned.

He should be.

I pulled the crumpled pages I’d gotten at Martinez’s condo out of my pocket and handed them to Halliday. Arthur passed her a penlight.

“She burned Professor Halliday’s work after she burned her own,” I explained with a dry mouth, as Halliday read. “Because she was afraid. Because she had found something.”

Halliday let out a gasp.

“What? What is it?” said Arthur.

“She proved P equals NP ,” I said. The sentence didn’t sound real. It felt like I was saying a line, lying, pretending this impossible thing was true. Halliday had her eyes fixed on the paper, frozen. I was pretty sure she had stopped breathing.

“Hey,” said Arthur, his voice low and tense as he put a supportive hand on Halliday’s back. “Help a layman out. What does that mean?”

“There’s a...a problem, in mathematics,” I said. “It’s called the P versus NP problem. What do you know about complexity classes?”

“Nothing,” said Arthur.

I closed my eyes. It felt absurd, somehow, that the world was ending and I had to stop and explain why. Absurd and surreal. “We can categorize problems according to how difficult they are computationally,” I said.

“Any problem in the set we call ‘ P ’ is something that can be quickly solved. We say ‘quickly’—meaning we can solve it in polynomial time on a deterministic Turing machine, but don’t worry about that. Any problem in NP is something that, if we have a solution, we can *verify* that solution quickly—but we wouldn’t necessarily know how to solve it quickly.” I tried to steady my voice. “It’s like if you have the solution to a maze, you can walk through that maze and make sure the solution works. But if you’re trying to find the solution, it’s a lot more difficult.”

“Okay,” Arthur said. “So, P problems you can solve quick, NP problems not so much. Yeah?”

“Well, so we thought,” I said. “We’ve never—*mathematics* has never,” I corrected, too loudly, “been able to prove, one way or another, whether P equals NP, or whether they aren’t equal, or whether it’s something that’s impossible to prove at all. It’s been one of the biggest unsolved problems in mathematics. Possibly *the* biggest—the question of whether anything we can quickly verify, we can also quickly solve.”

“Okay,” Arthur said again. “So?”

“So, most people figured P didn’t equal NP. We’d never been able to find a way to solve an NP-complete problem fast. Our whole understanding of the world...” I couldn’t explain.

“My proof threatened the economy,” Halliday managed hoarsely. “This proof, Rita’s proof—it could do so much more. It would revolutionize. Logistics, protein folding—everything would suddenly become easy. And encryption—” She made a choked sound. “A lot of encryption works because once you have the code, you have access. Which means once you have the answer...you can verify it, very fast.”

“And if P equals NP, *finding* that code is as easy as having it already and checking you’re right?” said Arthur. He let out a low whistle.

“It’s possible there’s a big enough constant in her reduction to prevent that, but the proof’s clearly constructive. She seems to have found an algorithm...” Halliday trailed off.

“Professor, even you aren’t getting this.” I spread my hands. “P equaling NP, it doesn’t just mean we can visit a bunch of cities quickly or break codes. It would mean *any* problem, any one we can put into numbers, would be near-instantly solvable. By anyone. We’re talking—we’re talking an overnight ballooning of technology into science fiction; we’re talking all of society going haywire, the basic functions of how we interact dissolving—”

“Implementation would still take some innovation; it wouldn’t quite happen overnight,” Halliday interjected, her voice firming up as she focused on the theory. “Even with a constructive proof, we’d have to translate the mathematics into programming. But, um—yes. Yes, I...I think you’re right.”

“Wait, you saying she’s right about society dissolving? From one math problem?” Arthur said. “How? Ain’t matter what Martinez found, the world’s the same place, right?”

“This one math problem rewrites our understanding of literally everything,” I said. “We can’t imagine what it might do. Everybody would suddenly be able to use a cheap desktop computer to find out—to find out *anything*. Science, medicine, economics, society—all the rules would get thrown out the window overnight, and when that happened...Arthur, I’m not exaggerating. Every piece of civilization might have to be reframed. Possibly rebuilt.”

“Rita thought so, too,” Halliday said. “Her note—it makes so much sense now.”

I’d forgotten about the note. Halliday took it out of her pocket, uncreased it in the circle of the penlight. “‘The world is dust,’” she read. “‘I made mathematics dust, your mathematics, our mathematics’—I thought she was referring to destroying my notes—”

“Keep reading,” I said.

“‘I cannot break the world. I cannot let you live in the world I see. It is too barren, too empty. No place for any mathematician. Particularly not for you, Sonya.’”

The words took on new meaning. “She wasn’t talking about the economy collapsing,” I breathed. “She was talking about just the *prospect* of knowing the reduction from NP to P, because—” My breath caught. I hadn’t realized. How had I not realized?

“What?” said Arthur.

“Her proof would make mathematicians obsolete,” I said. “Theorem-solving software—right now we can’t replicate the—the creative, the analytical leaps a human mathematician makes...” I was glad Checker wasn’t here at the moment. I would be too transparent in front of him. “But what we *can* do, if we put it in a proper logical language—”

“We can verify a proof is correct,” said Halliday. “We can do that already, Arthur. And if Rita’s proof checks out, if we can verify—”

“We can solve,” I said.

If we could understand, we could create.

Those mathematical leaps of intuition would no longer be mysterious. No longer be something unquantifiable and out of my reach. Because I wouldn’t need them anymore. Martinez’s proof might break the world, but it would also let me do math again.

Holy God. I had to find Martinez. We would find her, and I would make her tell me.

“She was trying to protect me,” said Halliday, still staring fixedly at the note. “Mathematics is...it’s everything to us. If a computer can replicate what we do, if there’s nothing special about human mathematical intuition...” I couldn’t see her face in the darkness. “She must have thought something in my own proof was getting close, that it was leading toward the breakthrough for hers. I—I think she overestimated me, as I don’t see how, but...”

“So let me get this straight,” said Arthur. “She works this out, then she suddenly cottons on to what it means, so she destroys it?”

“She thought she was saving the world,” Halliday said. “Maybe she was.”

“But what’s to stop someone else from coming along and finding out the same thing?” Arthur asked. “If it’s true, someone’s gotta find it eventually—”

“You don’t understand,” I said. I’d started to feel dizzy. “People have been trying to solve this problem forever. There’s a million-dollar prize for it, and that’s not even the reason everyone’s so obsessed. But nobody’s ever gotten close, and some mathematicians even started to suspect it couldn’t be solved at all. What Martinez came up with—it might well be hundreds of years before someone else thinks of the same breakthrough, if ever. Unless there really was something in your factoring proof,” I added to Halliday. “You two did work together; maybe something you used was the jumping-off point for her. It sounds like she was afraid you’d get there the same way.”

“I don’t know what she might have been thinking of,” Halliday answered haplessly. “Rita sometimes—she thought too well of me. She was the type of person who could make me feel slow. She would always expect I would make the leap with her, and I would have to ask her to go back, to explain—” She gave a humorless laugh. “I’m one of the top handful of people in my field, and she made me feel like a child sometimes. Often. It nearly gave me a complex.”

“It’s okay,” I said. “We won’t need to jump off your proof, because we’re not going to give up until we find her.” Figuring out the context of Martinez’s note had given me an idea. A brilliant idea. If there was one

thing in the world that might be as important to Martinez as her proof, it was Sonya Halliday. “We know she cares for you, Professor, in her, uh, in her own way. We can use that to lure her out. We fake some trouble for you, make it seem like you need her.” I was gaining steam. This would work; I knew it would. “Or spread the word that you’re sick, or that you died, if you think she’d be sentimental enough to come out of hiding for that.”

“May God protect her,” murmured Halliday. “What will the NSA do to her, if they find out?”

“Sounds like we’re talking major national security stuff,” said Arthur. “Ain’t know what they would think.”

“Well, *we* ’ll find her first,” I said. “And we can decide whether to hand her over or just make her cough up the proof. What she wrote to you, Professor—she was trying to save *you*. You’ll be our way in.”

“No.”

I turned sharply to Halliday. “What?”

She’d clicked off the light, leaving only her silhouette visible in the darkness. “I don’t want to go after her. Let her go.”

“*What?* What the fuck are you on?” I exploded, so harshly Arthur winced. “This is P versus NP! This is it! It’s everything! It’s—”

“And Rita made her decision.” Halliday took a breath. “It was clearly a decision she did not undertake lightly.”

“How can you let her—she screwed you over! She stole all your work. At the very least, don’t you still want it back?” If Halliday wouldn’t help

“Well, she burned it, didn’t she?” Halliday’s voice had a caustic bite to it. “So whether or not we find her, it’s already gone. I could rewrite the factoring proof again now, thanks to you. The rest, her papers—those were hers to destroy.”

“And you’re just going to accept that?” I couldn’t believe what I was hearing. This had to be impulsiveness, the madness of a moment—Halliday would come around, she would see—“Your friend Dr. Zhang was right. This is too big to be left to one person’s whims, especially when that one person is a senile old lady!”

Halliday sniffed, hard, but when she spoke her voice was steady. “Rita was as sharp as ever. And she wanted to solve the P versus NP problem more than anything in her entire life. If the knowledge terrified her this much...” The dark shapes of her hands tightened on the papers she held, crumpling them. “I have to trust her.”

“No,” I said. “You really, really don’t.”

“Then let me rephrase. I’m choosing to trust her. If she says this broke the world for her, if she says she was only trying to protect me—”

“You’re not making any sense!” I cried. “If her proof was valid, then P equaling NP is true whether or not you’ve seen the reduction. Besides, how could you not want to know? Her emotional response is immaterial—for Christ’s sake, the Pythagoras cult thought irrational numbers were demonic and refused to accept them; that doesn’t mean—” I stuttered, out of words, out of ways to explain. “This isn’t *right*, what she’s doing. The world should know. Even if all you do is turn it over to the NSA, the knowledge should be out there. You can’t just delete it from the world; it’s wrong!”

But I didn’t care about the world, if I was honest with myself.

I needed this proof.

Without it, I was nothing. With it, with the algorithm Rita Martinez claimed she had...I could discover any result, make mathematics unfurl before me, answer the most profound questions in the universe.

With it, I could do real math.

And that was all that fucking mattered.

“Arthur, talk some sense into her,” I said, desperate and no longer caring. We’d already tried everything else to find Martinez. Now we’d caught on that the best and maybe the only thing we could use to lure her out was Halliday herself, and we knew what she *had*, and Halliday was saying *no*?

“Dr. Martinez stole your work,” I added to the professor. “She stole your work, and it led to you getting kidnapped, and even then she said nothing. If she’s got a polynomial-time reduction, she might have halved the search time we took tracking you down—” We might have avoided the Feds entirely; I might have avoided getting almost killed—

“She didn’t know what you can do,” Halliday pointed out. “She didn’t know how you were searching.”

“Yeah, because a Hamiltonian cycle isn’t one of the most famous NP-complete problems of all time! She left you to die! If she’d rubbed two brain cells together, she would have known we were using some type of search algorithm and that her math could have *helped*—”

“She probably didn’t think about it,” Halliday said. “Rita doesn’t... sometimes she doesn’t see the things in front of her. She’s too lost in the mathematics. I can’t fault her for that.”

“Or for ruining all your research?”

She turned away from me slightly. “She was trying to do what was best for me.”

“Arthur,” I said again, “You convince her. Convince her!”

He’d shoved his hands into his pockets. “This what you want?” he said to Halliday.

She nodded.

Arthur faced me. “I ain’t going to go against Sonya’s wishes here. Way I see it, Doc Martinez ain’t giving that proof to no one, so it ain’t like the world’s in any of that sort of danger. If Sonya wants to respect her choice, I’m on board.”

I was stunned. “And what if the Lancer finds Martinez? Is he just going to accept the fact that she doesn’t want to tell anyone about it?”

“Lot of things can go wrong in this world,” said Arthur. “Ain’t mean we can’t all make our own choices. Ain’t mean Dr. Martinez can’t make this one.” He looked down at Halliday. “Martinez wronged you, but I get why you’d forgive her. I ain’t got a beef with her beyond that.”

“You’re only saying that because you don’t understand what this means!” I accused Arthur. We couldn’t give this up. We couldn’t. I tried to temper my tone and played one last hole card. “Professor, if you’re so concerned about her, we *should* go after her. If we get to her first, then we can help her escape the Feds. She’s not going to know how to stay off the grid, but that’s one thing I’m exceptionally good at—I can help her.”

Halliday hesitated. Then she said, “No. Let it go. She’s smart, and she’s clearly figured out how not to be found. If we keep digging after her...no. Just let her go.”

No. To find myself so close to salvation, and then to have it destroyed by people who didn't understand...

Arthur turned toward me, his face unreadable. "Job's over, Russell. Thank you. For your help."

I half expected him to offer me money. I think I would have punched him if he had.

I wheeled around and stormed off, back from the lake, away from the safe house and back to my car. This job was over when I said it was fucking over. If Arthur didn't want to help me find Martinez, if Halliday didn't want to take advantage of her connection—well, screw them. I would do it myself.

I drove in the opposite direction I wanted to, switched cars, and made sure no one was following. Not that the NSA wouldn't be able to pick me up again if they were interested, dammit. They knew where Checker lived, as much as Arthur had tried to keep the impression that he wasn't on this case.

Of course, when I got to the Hole, Arthur was waiting for me. Goddammit.

"Russell," he said.

"What?" I tried to brush past him, already checking my bug detector.

"Talked to Checker already."

I stopped.

"Don't pursue this. Let her go."

"No," I said.

"It's the decent thing to do, Russell."

"*Decent?*" I burst out. "Decent! She has a proof that could—" I clamped down on the words.

"Revolutionize mankind, I know," said Arthur. "What are you gonna do? Twist her arm until she shares it with you?"

"You don't get it!" I cried. "You say 'revolutionize' like you understand, but you *aren't getting this*. This is—it's bigger than splitting the atom, or the combustion engine, or—or the invention of electricity, or whatever other technological revolution you're thinking of. You don't understand what this proof would mean!"

“Then maybe Martinez is right,” said Arthur, “keeping it to herself. Maybe that’s the right call here.”

“That’s *never* the right call!”

Checker pulled open the door to the Hole and came out. “Cas. Hey.”

“You’re going along with this?” I cried. “You? Mr. ‘Knowing is Always Better Than Not Knowing?’ Did he *tell* you what we found?”

“Cas—”

“This is bigger than you, than me, than all of us!” I ignored the guilty twinge acknowledging that wasn’t the reason I wanted it, and stabbed a finger at Checker. “*You* should understand that!”

And he should understand what it meant for me. He should *know*. The fact that he should have connected how important this was for me but was still siding with Arthur—it hurt, a deep and private pain I buried ruthlessly under my anger.

“I do—I get it; this is...” Checker trailed off and waved his hands limply, as if he couldn’t figure out how to encompass something as huge as P equaling NP . “Cas, how can this not terrify you? If this proof is right, if Turing machines are that much more powerful than we thought—will human innovation even mean anything anymore? Not just in mathematics, but everywhere—engineering, new technologies—there’ll be nothing left human intelligence can offer above a computer. Nothing. And then what? Humanity becomes superfluous? Dr. Martinez said she thought this would break the world; what if she’s *right*?”

If she was right it wouldn’t matter, because in the wake of the new apocalypse, I would be whole again. A true mathematician. Hell, I’d be more than a mathematician—I’d be a god.

I didn’t say any of that. “Coward,” I said instead. The word came out bitter. Hateful.

“Yes,” Checker admitted frankly. “I am. This scares me. Beyond belief.”

“And when has that ever stopped you?”

He hesitated. “If it were my decision, I’d...you’ve got a point; I’d probably close my eyes and take the leap, and scream while I was doing it. But Arthur’s right. It’s not my call. I’m not the brilliant mathematician

who made the breakthrough. It was her accomplishment, and she made her decision pretty clear.”

Arthur made a small, approving noise.

“Stop parroting what he said to you,” I said.

A flush crept up Checker’s face. “I’m not.”

It had never occurred to me that Checker wouldn’t back me up. Arthur didn’t know what he was saying, didn’t grasp all the ramifications, but Checker—he should have been knocking me over in his desire to find Martinez. He should have been shouting at Arthur about this, throwing every resource he had into it, *insisting*. The fact that he wasn’t...he was betraying all of mathematics, betraying computer science—betraying me.

“If she found it, someone else will,” I said, aware I was blatantly contradicting what I’d told Arthur and Halliday earlier, but feeling too vicious to care. “And you’re making me hope that person does as much damage with it as they possibly can, because it’s your fault we won’t be ready.”

I started to stomp off, then turned back and added to Checker: “And you. You’ll let one old woman decide the fate of the whole world without a fight, but you won’t let me decide what’s right for my own life. Fuck you. I’m done.”

Checker tried to stutter a response, but I was already striding away.

I didn’t need them. I’d worked on my own long before I’d ever met Arthur or Checker. I would find Martinez somehow, with or without Halliday’s help, and I would pry the goddamn proof out of her if I had to lock her in a room and extract it.

Then I’d figure out if I wanted to share it.

CHAPTER 29

I MADE it back to my car and stood there on the darkened street. I wasn't sure where to start.

Fuck. In the past two years, I'd started to take it for granted I had Arthur and Checker around. I had a secure computer back in my apartment, courtesy of Checker, but I wasn't much better than basic search engines.

Checker was right, damn him—I should have taken the time to learn. Computers were just math, weren't they? I ignored the small voice in my head reminding me I'd never have the patience to keep up with the latest hardware, let alone memorize any sort of programming language.

And I couldn't take the time now anyway. Fuck me twice.

Before Checker, I'd had an information guy. His name had been Anton Lechowicz. The last case I'd involved him in had killed him.

My hand twitched, and I wanted to put my fist through one of the car windows. I hated thinking of Anton.

And I'd never cultivated any backup contacts. I didn't like working with people I didn't know.

I got into the car and drove home, mulling as I did so, trying to remember who else in my line of work I remotely trusted. The list wasn't very long. As soon as I got back I pulled a new phone out of a drawer—I'd burned the old one; Checker would be tracking it and I didn't want him to—and called Ari Tegan, my friendly local forger. He was seriously competent and had desisted from giving me up to the Mafia the year

before, which I didn't really understand but which made me like him even more. He seemed to like me, too, for some reason. I wasn't sure why.

"Tegan, it's Cas Russell," I said when he picked up.

"Cassandra! Hello! How are you faring?"

I winced. Tegan's use of my full name had always bothered me, but now it echoed with the man from my dreams, the one who kept calling and pleading for something I couldn't deliver, echoed against that name on a graveyard cover stone saying I'd died and the signature on the bottom of the note inside. I tried to let it roll off.

"Fine," I said shortly. "I need an information guy. Someone good at tracking, data mining, that sort of thing. Can you give me any recommendations?"

"I usually send people to Arthur these days. I thought you worked with him as well?" I was one of the few people Checker knew in person and allowed to call him directly—most people just knew that one of the services of Arthur's private investigations business was electronic data gathering.

"He's busy," I said. No need for Tegan to know the details.

"Hmm," he said. "Mickey McTaggart is quite good. But she works for the Lorenzos. I gathered you resolved things with Mama Lorenzo, but are you still persona non grata with them?"

"I don't know," I said honestly.

"Then I am unsure." He thought for a moment. "If you require sensitivity to discretion, I do not know of anyone else local I would trust, at least not anyone I would recommend as having a high level of skill. I do know of perhaps a surprising number of people who work virtually, who have been clients of mine or who have partnered with my services on occasion, and whose abilities have impressed me. I stress that I do not know their bona fides, only that they have been honest in their business dealings with me, and as far as I can tell would have the expertise you require."

"I guess that's better than nothing." I preferred to meet people in person, in case I needed to track them down afterward for any reason. Particularly any reason that involved putting a gun to their heads. But

there was some saying about beggars and choosers. “Anybody I can check out another way?”

“You might see if Arthur can check the names for you, if he is too busy to take the case,” suggested Tegan. *Yeah, right. Fat chance of that.* “I’m afraid they work pseudonymously, under screen names, but they do depend on those screen names for their reputations. Let me think. Griffon, Two Key, Doctor Yee, General Zephyr. Grep, Shift, the Lancer, Hijack, a newer gentleman called Lincoln—”

“Wait,” I said. The Lancer. Holy shit. “Go back.”

“I can email you a list,” Tegan offered, oblivious. “With their contact information, such as it is. You may give my name, if you like.”

“I’d appreciate that,” I said.

I hung up and stared at my computer screen, not seeing it.

One of the tidbits Checker had dropped while we searched for Martinez was that the Lancer had gone underground, unwilling to make contact with unknown entities for fear someone was an NSA plant. But if I had a reference from Tegan...if the Lancer could be assured I wasn’t a National Security agent in disguise...

I wasn’t very good undercover, but that was in real life. Virtually, it would be a lot easier to lie.

Holy crap. I might be able to track the Lancer when even Checker and the NSA couldn’t. Like I’d told Arthur, this job was over when I said it was, and I owed the Lancer a broken face.

Of course, none of that helped me find Martinez. I wondered if the Lancer was looking for her, too. If he’d figured out what she’d really proven.

Maybe I should tell him. With his obsession over the P versus NP problem, he’d stop at nothing in order to find her. Unlike Checker.

But then what? Letting the Lancer get his hands on the proof—or on Martinez, I reminded myself guiltily—wasn’t the most appealing option.

Except he would publish it. He’d tried so many times with his amateur work; he wouldn’t be able to stop himself. He’d get the algorithm out of Dr. Martinez, steal it, and publish it himself, and the whole world would be able to see.

The whole world. Including me.

Arthur wouldn't approve, said a voice in my head. Scratch that, not only would Arthur not approve of me sending a kidnapper and murderer after a slightly dotty old woman, he'd probably go as far as pulling a gun on me to try to stop me. I'd beat him, but that wasn't the point.

Isn't it? Arthur was just the one saying everyone should get to make their own decisions. Well, I should get to make this one! The justification echoed in my head, sarcastic and mocking. I knew that wasn't what he'd meant.

But Arthur had backed out of this whole case, so I should get to play it just like I would if I were going it alone. I remembered my sardonic promise to leave out the plastic explosives if I was working for him—well, I wasn't working for him anymore, and that meant he didn't get a say.

A niggling feeling reminded me that getting an elderly mathematician kidnapped by a killer wasn't *my* MO, either.

"She brought this on herself," I said aloud. Martinez had refused to share the proof and then stolen all of her colleague's work to control this decision. She wasn't innocent.

Can't believe you're even considering this, said some vestige of conscience, in Arthur's voice. I tried to ignore it and imagine what I would've been thinking two years ago, before I'd met him. Would I still have been having doubts?

I needed that proof. The reality of going on without it, when it was out there, when it could *fix* me—

"Find a way," I growled. My fucking *job* was getting things back for people, and I was really fucking good at it. I could get this proof back, and I could use the Lancer, and I could double-cross him and bash his face in and make sure Martinez didn't get killed but instead gave me what I needed, whatever it took.

A strange euphoria flooded me, and I felt alive and reckless. I could do this. And depending how it played out, when I was done, the world might never be the same. I might be one of the four horsemen of the apocalypse...or I might be a harbinger of the second coming.

The power of it was heady, almost like a drug. I wondered if that was a taste of what Martinez had felt.

My email chimed. It was Tegan, with the promised list. I scrolled down to find the Lancer. There was a web address to a forum and instructions for dropping a passcode.

I clicked over and left the correct message. I'd be giving my real name this time, since Tegan was giving me a reference. It would be fine as long as the Lancer didn't ask him what I looked like.

I didn't know how long I'd have to wait for a response. I should sleep. I shut the laptop.

This is a terrible idea. I wasn't sure if the voice belonged to me, Arthur, Checker, or the man from my nightmares.

"Shut up," I said. "I'll find a way."

I flopped down on my bed, but couldn't close my eyes. If I did, I would dream.

CHAPTER 30

BY THE TIME my email chimed again, I had a plan.

The Lancer's response to my overture was short and suspicious, but as Tegan had come through with the promised referral, he was willing to talk. Hopefully the revelation that someone had solved P versus NP would tantalize him enough to override any further common sense.

I felt a brief pang of guilt for screwing over Tegan's good reference. If this ended the way I wanted it to, the Lancer and whoever among his men were unlucky enough to be with him would end up dead or in NSA custody. I mollified myself with the fact that "dead or muzzled by the NSA" meant they wouldn't be able to go around spreading the gossip that Tegan's word hadn't been on the level.

I sent the Lancer a very clear, firmly-worded email laying out my plan, and then drove to Checker's house and parked down the street.

I had to wait forever for him to leave. I was almost resigning myself to wondering if I'd have to break in with him still there when he came out of the Hole and got into his car. Even from this distance he looked exhausted, his movements dragging as he hauled his chair in behind the seat. Maybe it was the vantage point that made him seem thinner than normal.

He drove away. I waited seven minutes—I needed enough time to finish my robbery before he could get back, if his security system alerted his phone to my presence.

I pulled into his driveway, entered a code on the keypad on the side of his house that would disable his ruder security measures—he'd given it to

me in case he was ever in trouble—and jimmied his front door open. Then I scooped up all Martinez's notes that Arthur had grabbed from her home and work. It took two trips, but I was still out and driving away in no time at all.

The keypad code wouldn't have disabled the surveillance parts of the security system, which were backed up to the cloud and therefore did not exist on tapes or hard drives I could steal to erase my presence. Checker would know I'd been there. I just hoped taking all of Martinez's notes would make him and Arthur thoroughly confused as to what I was actually after, considering they could use that same security footage to rewind and watch Arthur and me looking through them.

Maybe Checker would just think this was my way of being messed up in the head about my broken mathematical ability, swiping math notes to chew through on my own.

I'd taken my laptop with me, and instead of driving back to the apartment I'd been using, I zipped over to a new bolt hole this time, one Arthur and Checker didn't know about. My housing was all interchangeable anyway. Once there, I opened the booklet with Martinez's one-time pads in it and started getting to work on my message, a message only she would be able to read.

One-time pads provided theoretically perfect security. Any message could potentially be decoded to mean anything, so even if you had the original text, there was no way to verify its correctness. Which meant even in the new world that might pivot off Dr. Martinez's discovery, a one-time pad was uncrackable.

Theoretically.

This one wasn't, of course. Too many people had seen the key—too many meaning Arthur and Checker's surveillance system and who knew who else. But I didn't think it likely it was compromised enough for the Lancer to be able to gain access and read the contents.

You're gambling that with the life of a seventy-year-old woman. I stopped for a moment, my pen poised over the sheet of paper I was composing on. But come on, chances were next to nothing the Lancer could have seen this booklet, weren't they? A much lower probability, I estimated, than that he would come after Rita Martinez anyway just because of her connection to Sonya Halliday.

It was worth the risk. Martinez wasn't innocent, I reminded myself again—she'd stolen from Halliday twice, the second time compounding it with a crime against the U.S. government that still had the potential to get other people in deep trouble. More importantly, she'd run off with a proof that should, by all rights, belong to the world. I didn't care if she'd discovered it; she shouldn't be allowed that level of selfishness.

I repeated those thoughts to myself until I couldn't hear the doubts gnawing away at the back of them, and finished my message. Then I tore out the first page of the booklet and burned it, and sent the already-coded text to the Lancer, with instructions.

My plan was simple. We knew from the second theft that Rita Martinez was keeping tabs on Halliday and her work with the government—and it made sense anyway, considering Halliday's well-being seemed to be the one thing Martinez actually cared about. I'd directed the Lancer to make it look as if Halliday had been kidnapped again, this time out of government custody. And I'd told him to plant a "ransom demand" that would actually be my coded letter—a code he wouldn't himself know the contents of, one I'd designed for only Martinez to understand.

It wasn't a foolproof plan. First of all, I'd been skeptical the Lancer could even pull off the electronic kidnapping ruse, but he had scoffed at me—as much as one could scoff online—and told me it would be done. Even if he came through, however, I didn't know how Martinez was keeping track of what was going on with the Feds—if Zhang had been her inside man, maybe she wouldn't even see my planted note. Or maybe she'd see it and not have brought her own matching one-time pad booklet with her to decode it. Maybe what I had *was* supposed to be her copy and someone else had the other end of it.

But hell, it'd be worth a try. And I didn't dare tell the Lancer who we were looking for or how I was directing her to contact me. If I did, there'd be nothing to stop him from cutting me out entirely and going after Martinez himself, and that would be disastrous. All I'd divulged was that there was a mathematician who'd solved P versus NP, that I wanted the proof and knew he did too, and that the one place I knew this mathematician was watching was the Halliday investigation. That last bit of intel would make sense even if Martinez and Halliday weren't friends, given the subject matter.

If this worked, I planned to get my hands on Martinez myself and then set up a fake meeting with the Lancer—ostensibly to bring her to him. But instead, I'd use the meet to give him that smashed-up face I owed him. Halliday would be safe, the DHS would be happy, and this whole case would be wrapped up in a nice, neat bow.

And I'd have Martinez.

I got a reply from the Lancer almost immediately in the same curt, suspicious style, telling me he'd send confirmation when he'd done what I asked. I didn't think he liked my plan, but I'd threatened to cut in a different computer expert if he hadn't agreed to it, and I knew he wanted this proof too much to let that happen.

All I had to do now was wait. Wait for the Lancer to plant the evidence, wait for Martinez to see it...and then wait for her to surrender herself in order to save her friend Sonya. In the coded note, I'd told her Halliday had given up the factoring proof to me already, and I'd dropped enough mathematical specifics to prove it. And then I'd announced Halliday was of no more use to us, and if Martinez contacted me and offered herself in exchange we'd let dear Sonya go—and if not, her friend would die.

I wasn't very good with human psychology, but I was pretty sure that would work.



I DIDN'T bother trying to sleep again; I needed to set up two traps. First I needed a place where I could grab Martinez and make sure she hadn't brought any law enforcement with her—not that I thought she would; she'd be too concerned about Halliday. And then I had to plan a solid ambush for the Lancer, somewhere I'd tell him I'd join up with him but where I'd take him down instead.

I started Martinez off with a burner phone taped to the back of a dumpster behind a concert hall in Hollywood. I'd be able to blend in with the copious crowds and watch remotely as I gave her instructions, and I could send her through a series of cars to increasingly deserted areas and make sure no one was following her. But I also had to prepare a place to bring her—somewhere she couldn't escape from.

My conscience tried to bray at me again, but I firmly shut it up.

Most buildings in Southern California don't have basements. The lack of freezing weather means they aren't needed to plant a house firmly in the ground below a frost line, and combine that with our nice collection of earthquake activity, and it's cheaper and safer to build everything on slabs. It's a shame, really, considering most above-ground places aren't built to imprison people in, so a basement is a perfect place to keep someone captive without chaining her to a wall.

But just because *most* buildings didn't have basements didn't mean they all didn't, and I thought I knew of just the place: a collection of buildings that used to be a staging ground for a drug cartel. I'd pulled a girl out of a basement there two years before; it seemed only fitting I should get use out of the place now.

The compound was indeed still abandoned, with the musty smell of the long-disused. I spent a day stocking up supplies and making my basement prison as comfortable as possible. And then I reinforced the door and added a new lock.

By the time I got back to Los Angeles I had an encrypted message from Martinez:

Let Sonya go. I will come.

I noticed she hadn't said anything about the proof. She probably intended to gain Halliday's freedom and then never let me pry it out of her. I'd have to find a good way of making her talk.

I shied away from that thought. Bridges, crossing them, whatever. I could wait and see how this played out first.

I returned her message, telling her to pick up the burner in Hollywood at ten p.m. the following night. Then I sent a message to the Lancer:

Everything is in motion. How soon can you be in Los Angeles?

Now it was time to booby-trap my own building to catch *him* in.

CHAPTER 31

I RETURNED from a full night of making preparations to find two messages waiting for me.

En route, was all Martinez's said. The Lancer's was a lot more suspicious, quizzing me about my plans and making it clear he wanted to be with me at the pickup from the beginning.

Do not double-cross me. I know who your associates are. With the click of a button, I could ruin you.

Damn the fact that I'd had to use my real name. *Real name? You know it's not your real—*

I slammed away that line of thought. The Lancer was implicitly threatening Tegan, and probably also Arthur; it wouldn't take much asking around to find out we worked together on occasion. Fuck.

I'd just have to make sure he never got a chance to take revenge on me.

I tried to reassure him—meaning I made it clear he had no other choice but to trust me, so fuck what he wanted—and we went back and forth a few more times. The Lancer's emails got longer and longer each time, vituperative rants shot through with narcissism. Christ, this guy was an asshole. I started skimming instead of reading.

We are dealing with a result of grave importance you couldn't possibly understand...if this mathematician has genuinely made progress on proving what you say then I am the only one who will be able to interpret and complete this essential work...you wouldn't know this, not being in the mathematical field yourself, but my knowledge of this problem is unparalleled, and it is an exceedingly lucky thing that you brought this to me and no one else. So don't fuck it up now...you must know my experience in this matter will be extremely vital in dealing with this mathematician, but I still require some tangible guarantee you'll be bringing her directly to me. My own writing in this area is unmatched and I will be the only one who can bring this proof to fruition...

I snorted. His own writing was only unmatched in quantity because he'd written so many fallacious "proofs." What a dick.

I started to reply by copying and pasting my previous email, which had given him instructions on where to meet me the next day after Martinez was safely tucked away—in other words, where I would put him down for good—when I suddenly felt like I'd plowed face-first into a brick wall.

I scrolled up, the blood rushing in my ears.

You must know my experience in this matter will be extremely vital in dealing with this mathematician, but I still require some sort of tangible guarantee you'll be bringing her directly to me...

Her. He'd said "her."

Fuck. Oh, Jesus, fuck.

Women in mathematics were the minority, and I'd been careful never to use a pronoun so as not to give him any clue. The Lancer knew we were going after Rita Martinez.

How had he figured it out? Only Arthur, Checker, Halliday, and I knew Martinez was involved at all. And Zhang, but he wouldn't have told anyone.

Could the Lancer have made a wild guess based on Martinez's and Halliday's friendship, and the fact that they were both in the same subfield? No, that was ridiculous; this problem had a one-in-infinity chance of being solved by *anyone*, and he would know that. Absent other information, it would be far more likely someone halfway around the

world had solved it and was simply keeping an eye on how the U.S. government was responding to a similar proof here in California.

The Lancer must have used his computer skills somehow. Maybe he'd hacked into communications between Halliday and Martinez, or between Martinez and Zhang, and read between the lines—maybe he'd been convinced by Martinez's sudden disappearance from Pasadena—hell, maybe he'd hacked Checker's security system, found the one-time pad, and been reading my encoded messages to Martinez all along. Or maybe he just *did* know the field that well, and knew Martinez was one of the few people who had any chance of solving this.

Why was it only now that these possibilities all felt so likely, so dangerous? Why had I brushed them off yesterday as remote and implausible?

I remembered how easily the Lancer's men had found me on the strip mall's security cameras. Probably the only thing that had kept Halliday and me safe since then was Halliday had been in the Feds' custody and the investigation for the Lancer here in the States had gotten hot enough for him to be forced to disappear. But he wouldn't care about that anymore. P versus NP was too big a coup—he'd come back to Los Angeles and play cat-and-mouse with the NSA and DHS if he had even the slightest chance of grabbing the proof for himself.

And now he knew Martinez was coming here.

Fuck, fuck, *fuck*.

I jolted up from my chair and started pacing around the room. If the Lancer got his hands on Martinez...Christ, there was no telling what he'd do to her to get the proof. The lengths she'd already gone to in order to hide it meant she wasn't going to give it up easily, and maybe she'd be able to pretend to give him information for a while, but the Lancer knew enough mathematics to see through that. She wouldn't be able to keep up the charade for long.

Calm down. Think. What would the Lancer's play be?

If Checker's search of Eastern Europe was anywhere close to correct, the Lancer had been continents away yesterday. It would have taken him time to figure out who I was going after. It would have taken time for him to get here. He might even still be on the way.

It would take him time to locate Martinez. Even if he'd caught a glimpse of her somewhere already—an airline terminal, an ATM camera—she was on the move. He didn't gain much by going after wherever she'd been, not when he knew where she was going.

Fuck, it was how I would play it. Go straight to Los Angeles, and then scoop her up at the earliest possible moment, before someone else had a chance to get to her.

Though if the Lancer could find her here stepping off a train or bus or plane or driving into the city, I was willing to bet Checker could, too. Especially if I gave him a heads up to be on the lookout. And once he found her, Arthur would run immediately to pick her up.

I wouldn't have banked on them helping *me* out of my screwup, but they would come for Martinez. All I had to do was pick up the phone and call, they would come help save her from the danger I had put her in. They'd probably never speak to me again afterward, but they would come.

And walk right into the Lancer's sights themselves.

I imagined how it would play out if Arthur went to grab Martinez at the same time the Lancer did. Arthur getting trapped in a firefight and stubbornly protecting an elderly mathematician with his own life. Arthur getting shot or captured as a pawn. And all because I'd dragged him in to clean up my mess.

Maybe I could warn him to take the whole fucking DHS with him.

Or, fuck that, maybe I could still clean up my own mess. Martinez had been hiding effectively from the NSA, and she'd be continuing to do so, but I knew where she was going to be, so I had a leg up on everyone else. I didn't have to call in Arthur and Checker. Which was good, because I would've preferred shivving myself in the eye to phoning them.

And I should be able to beat the Lancer, too, for the same reasons. Unless he'd been decoding our messages somehow...

Of course, even if I got to Martinez first, my original plan was shot. The Lancer would be watching for her face on every camera. If I tried to spirit her away to my basement prison, with each block I told her to travel, I'd be putting her in more and more likelihood of being in the middle of a firefight or being snatched by a mathematical zealot who had no moral compunction at all about prying her proof from her.

In other words, exactly what you've been planning on doing?

I slumped in my chair and dug the heels of my hands against my eyes.

Kidnapping an old woman—I'd been able to rationalize it. The cause was too great. Too important. But putting that same woman into the crosshairs of someone else, somebody this violent...

The Lancer won't want to kill her. He'll just want to take her, like you wanted to, and get the proof out of her, and then publish it.

Would it really be such a bad thing, to let him do the dirty work? He wouldn't be squeamish about it. You'd probably get it faster.

Jesus Christ.

When had I started thinking things like that? When had I become that person?

Or had I always been that person, and I was only hating myself now because I had Arthur to compare myself to? Checker's words echoed in my head: *You don't know who you are, and that scares the ever-living shit out of me.*

Suddenly it was scaring me, too. I felt lost, rudderless, my compass swinging wildly with no indication of which way was the right one.

My hands slapped down onto the table. *Fuck* my past. I didn't need it. I didn't want it. I could decide who I wanted to be all on my own.

And I wasn't going to be the type of person who let a homicidal fanatic get his hands on an old woman. No matter what she had. I could find her again later myself, but this plan had to be called off.

I tried emailing Martinez to abort, but after thirty minutes with no response I had to assume she was traveling and wouldn't get the message. She'd show up smack dab in the middle of Hollywood, where there were plenty of people and plenty of cameras. The Lancer wouldn't be far behind her.

I needed to get Martinez back off the grid as fast as possible. And then I needed to get the Lancer off her trail before he could catch up with her. Which meant...

Oh, fuck. The best way to get the Lancer off Martinez's trail would be to put him on mine.

What kind of person did you say you wanted to be? The voice echoed in my head, taunting and cackling.

If I really wanted to get Martinez off the hook, the best way to do it would be to martyr myself.

CHAPTER 32

MARTYRDOM WASN'T of interest to me. It was more Arthur's bag. But I needed a distraction for the Lancer, and stealing Martinez's identity and running the opposite way she was going, using credit cards and dropping clues, was the best one I could think of.

Of course, intentionally exposing myself like that for long enough meant the Lancer would eventually catch up to me. He'd put together all my identities and figure out I'd double-crossed him. If he won the cat-and-mouse game, he'd probably chop off my legs and keep me in a dark hole until I reproduced both Halliday's and Martinez's proofs myself.

And I couldn't expect any backup on this one. Rio would never be able to get here fast enough, and the Lancer had already proven his ability to hide from Checker, even if Checker and Arthur would be willing to come after me—and if it was just me in the crosshairs, I didn't think it all that likely they'd be motivated to do a damn thing. Not when the reason this was all going wrong was my own insistence on hounding after Martinez; not when I'd been the one to put her at risk. Not when this was all my own fuckup.

I could almost hear Arthur saying something about consequences.

So be it.

I called Tegan and got him to mock up cards and documents in four identities: a solid set of papers for Rita Martinez in a new name that she could use to disappear, and then some cards in the names of Rita Martinez, Cassandra Russell, and the alias Checker had used for me the first time

we'd dangled me in front of the Lancer. I'd have to come up with ways people on the run would plausibly use those cards. Maybe an emergency ATM withdrawal somewhere, or a mixture of plane tickets to all different cities as if we were trying to get people off our trail—only I'd use a library terminal that could be traced back, and check out border crossings into Mexico at the same time. More ATM withdrawals to get cash, maybe a credit card used to reserve a rental car...

I didn't think I had to be *too* subtle; the Lancer would have to check it out regardless. Hopefully, by the time he tracked me down, Martinez would be long gone.

And then what? Best case scenario was that I beat up his goons every time they came after me and eventually got a chance to shoot the man himself. Worst case scenario...

Worst case scenario was also the most likely scenario: he wasn't going to underestimate me this time. Worst case scenario was that he nabbed me and then *still* went after Martinez and Halliday without anyone being able to stop him. After all, the NSA hadn't been able to find him, either.

A stray thought flickered through my brain, and I stopped breathing. Regardless of what happened to me, I could make sure the Lancer got brought down. I could make sure he'd never come after anyone again. I could make absolutely sure the DHS caught up with him, took him by surprise, and dropped the hammer on his fucking head.

It would mean I'd have to call Arthur and ask him for help—not just for backup, but *help*. And it would mean I'd have to willingly fuck myself over even more than I'd planned to.

I laughed hollowly. I wasn't sure which of those things I dreaded more.

I rolled my phone back and forth in my hand. For this to work, I'd have to let myself get caught again, instead of leading the Lancer on a merry chase. And this time, who knew what he would do to me before I got him taken down? What if he took me out of the country, buried me somewhere outside U.S. jurisdiction, somewhere impossible to get to? If the Feds kept up their protective detail on Halliday, and if Martinez successfully dropped off the map again, then Arthur and the government task force would have no urgency in hunting him. I'd have sold myself down the river with no one harboring the least incentive to come drag me back, not the Feds and not Arthur.

You don't trust him, said Halliday's voice in my head.

Of course I didn't. But it wasn't Arthur's fault, really, because...well, look what kind of person I was. I'd done the extreme opposite of what he'd asked, going after Martinez anyway, going after her with every intention of locking her up until she gave me her proof, and using a man we already knew was a vicious murderer to do it. If nobody else was in jeopardy, why would Arthur feel the need to help clean up after me?

Why would he set it as a priority to go out of his way to help, to leverage his relationship with the Feds to extract me from a shit show that was all my own making? This wasn't even karma; it was cause and effect. Play with matches and you'll get burned. And don't expect anyone to run in with a fire extinguisher and save you in the final act.

Maybe I could present it as business. A deal that would make sense for Arthur on Halliday's behalf, even though I'd be the only one at risk. If he said no, I didn't have to do it. Didn't have to get myself caught. Once I got Martinez out of danger I could just keep running, baiting the Lancer away, watching for the opportunity to shoot back.

And if I got caught anyway...

Well, that was the danger of playing with matches, wasn't it?

I dialed Arthur. The phone rang through to voicemail.

I hung up and stared at it, my mind going momentarily blank. I honestly hadn't envisioned that as a possibility.

I dialed Checker. He almost always answered his phone, but his number rang through to voicemail, too.

Shit.

I texted them both with my current phone number, telling them to call me back urgently, and drove out to Tegan's to pick up my nicely forged documents and cards. Neither had called by the time I returned, and I was running out of time.

So this was what it felt like to be persona non grata.

As a last resort I dialed Arthur's office number, the landline.

"Arthur Tresting Investigations."

It was Pilar. Of course it was Pilar; she ran the office. For some reason I hadn't considered she would be the one to answer.

“Hello?” she said, when I hadn’t spoken.

“It’s Cas.” I wasn’t sure whether I’d said it fast enough to catch her before she hung up.

“Cas!” she cried. “Oh, thank God. We’ve been worried sick.”

We? “I was trying to reach Arthur,” I said. “He didn’t pick up his cell.” *Because he’s avoiding me.*

“Oh, yeah, he’s out right now taking care of something; he warned me he might be out of cell range. But he’s going to be sorry he missed you.”

“Right,” I said, almost under my breath.

“He will! He was just asking me if I’d heard from you. Everyone’s worried. Are you okay?”

“They’re not worried; they’re mad at me,” I said.

“What? No, they’re not!”

“Why aren’t they picking up their phones, then?”

“Okay, maybe a little, but—”

A little? If that was true, it was only because they didn’t know what I’d done since last seeing them.

“But—but that’s not why—well, I told you, Arthur’s out, and it’s probably just coincidence if you can’t reach Checker. Maybe he’s finally sleeping or something—I hope so. Come on, you know they’re not passive aggressive people; they’re not ignoring you!”

I bit my lip.

“Cas? Are you okay?”

“Yeah.”

“Sorry, but you don’t sound like it. Are you sure? Is something wrong?”

I didn’t say anything.

“Listen. It doesn’t matter if Arthur and Checker are mad at you, you know that, right? If you’re in trouble, they’ll drop everything. You *know* that.”

I did?

“Cas, are you? In trouble?”

I hung up on her, pressing the button on the phone so hard my hand cramped.

I'd never wanted to depend on other people, because when it came down to it, other people could let me down, and I had no control over it. Or I would do something, something unimaginably awful, like help a killer track down an elderly woman, and then...they would turn away, and there would be good reason.

I'd always assumed one of those things would happen, eventually. Been subconsciously preparing for it, emotionally.

But what if I was wrong? What if Pilar was telling the truth?

No matter what they think of you now, when they hear what you did...

It was hard to believe Arthur wouldn't think it justice, for me to correct what I'd done by sacrificing myself. He'd think it fitting. Wouldn't he?

Faith, Professor Halliday had said. I might not be good at reading people, but even I could see from the giant neon signs between the lines that she and Arthur had been estranged for years. And yet, when she'd called, he'd come. When she'd tried to push him away, he'd insisted.

When she'd asked him to trust her, he had.

Of course, he'd known her since they were five years old. Did I really merit that kind of loyalty? He and Checker had already chosen Halliday over me.

That's not fair, I chastised myself. *You know that's not fair*. It had been Halliday's work, Halliday's friend, Halliday's case.

I thought about Arthur driving to pick me up injured out of the desert dust, a year ago, after I'd gotten someone killed. I thought about standing outside Checker's house, in the rain, and I thought about the fact that he'd let me in.

Faith, Halliday had said.

Faith.

I picked up the phone and dialed Checker again. His phone was more secure and the voicemail wouldn't cut me off. "I need help," I whispered. I tried to gather my thoughts, tried to figure out what to say. "I did something stupid, and I need...I need help."

I talked for several minutes after that, stumbling through the thickness in my throat.

Then I hung up the phone, took a breath, and got in the car. I had one more stop to make before going after Martinez, before I hustled her back into hiding and then willingly put myself in the hands of a morally bankrupt crime lord.

All on the tenuous thread of trust that Arthur and Checker would get my message and do what I'd asked.

Vertigo suffused me, like I was tumbling off a ledge to plummet without any promise of a net. I jammed my foot to the floor all the way out to the desert, purposely not thinking of what I was headed out there to retrieve.

CHAPTER 33

I ARRIVED in Hollywood a few hours early—the Lancer might already be waiting, and I had to get Martinez out of here the moment she popped up. I sat in a coffee shop by a window and let my vision unfocus over the crowds. I'd only met Martinez the one time, but I was reasonably sure I'd still be able to recognize the individual mathematics of her posture and stride to pick her out of the throng.

The sun set, but the bright cheeriness of enticing storefronts blazing across the street made it as easy to see as in the daytime. I watched and waited.

At a little before half-past eight, Rita Martinez appeared.

She had on a shapeless sweater covering bulky layers of clothing and a scarf over her hair, and huge sunglasses that disguised her features. She wandered toward the concert hall, sat down on a bench, and checked her watch.

I stood and slipped out of the coffee shop, keeping my eyes on her.

Pedestrian traffic flowed by her. She looked around and then checked her watch again. She crossed and uncrossed her ankles. Then, before I was halfway to her, she stood and walked over to the ticket window at the concert hall, handed in some cash, and toddled inside.

I stopped, frustrated. Why on earth was she going into a concert? *Because you told her ten p.m., and she allowed too much margin for error and doesn't want to sit in the open on a bench for an hour and a half.*

Great.

I could find a way to break in, but the path of least resistance would be faster. Fortunately, I always kept a large amount of cash on my person. I marched up to the window. “I need a ticket for tonight.”

The little old man behind the window paused in the act of closing up. “We still do have some mezzanine seats. I can sell you one, but...” His eyes glanced up and down at my cargo pants and combat boots, and I wondered if he was about to quote a dress code at me. I tried to remember the last time I’d showered, and couldn’t. “But the performance has already started,” he continued. “You’ll have to wait for an usher to seat you.”

“That’s all right,” I said, shoving money at him.

An honest entrant for once, I pushed through the door and into the concert hall. Martinez was nowhere in sight—she must’ve been seated already.

Only mezzanine seats left, the attendant had said. I climbed the broad staircase in front of me, my boots soundless on the luxurious carpeting.

An usher stood sentinel near the top of the stairs. I waited until she glanced away and then slipped by her. Classical music poured out when I opened the door, but I was inside before the usher could turn around.

The mezzanine was only sparsely filled. I slid into the nearest empty seat and waited for my eyes to adjust, the rich acoustics of the symphony swelling around me. Then I studied the rows of heads in front of me, measuring heights and eliminating hairstyles.

There. There she was.

Martinez was a few rows back from the more populated section at the front of the mezzanine, a small, squat silhouette in the darkness. Keeping low, I slipped out of my seat and forward, then down the row so I could sink onto the red velvet of the seat next to her.

She was perched straight-backed and alert but staring at nothing, twiddling her fingers against each other along with the music. The movements were jerky and almost fanciful, like she was a witch incanting over a nonexistent cauldron.

“Professor,” I said softly. “Remember me?”

She ignored me. The music swelled, bursting to a climax.

“I was working with Professor Halliday,” I said. “We discovered what you proved. We know.”

Cymbals crashed. The violins screamed across the scale.

“Sonya,” said Martinez. Her voice was a grandmother’s voice, scratchy yet delighted, tired but mischievous. “She was always too smart for her own good, was Sonya. I’m sorry for what I’ve done to her.”

“We’re not the only ones who know,” I said. *Thanks to me.*

Her head bobbed up and down, resigned. “The NSA?”

“No. None of us told the government; even Dr. Zhang kept you a secret. But the men who had Halliday before—they’re coming. They know you’re here. They—” I swallowed, wondering if or how I should reveal my own part in it. “They don’t really have Halliday again; she’s safe with the Feds. They were just saying that to get you back here.”

“I suspected.” The slightest sigh escaped her. “But in the expectation calculation, Sonya’s life has infinite value. I had to come.”

It was so like something I would say.

I slid the envelope of clean documents out of my jacket. “Here. Use these to disappear again. Check in with Halliday later; let us know you’re—let us know you’re safe.” I clenched my mouth shut. I shouldn’t have said that last bit. But even after everything, I couldn’t bear the thought of her disappearing entirely again. I had to leave that window open, that sliver of hope we could find another way, a better way, for her to fix me. “Go now, Professor.”

She made no move to take the envelope. The music paused, holding its breath, then dove into a smooth, slow river of sound.

“The second movement,” whispered Martinez. “The andante. Mozart was a perfecter, you see. Haydn the inventor; Mozart the perfecter. The perfect symphony. Almost half a hundred of them.”

I had no idea what she was talking about. Arthur was the classical music buff. “Professor, did you hear what I said? They know you’re in Los Angeles. They’re coming—”

“I think I could do it.”

I closed my eyes and forced myself to patience. I couldn’t drag her out of here; we’d make a scene. “Do what?” I bit out.

“Write one,” she answered. “Write a Mozart. I think I could quantify my appreciation sufficiently.”

And then it hit me. *If you can verify, you can solve.* So if you could appreciate...you could create.

Martinez's proof potentially let her solve any problem in the universe. It could lift the veil from any spark of human inspiration, including Mozart.

Potentially.

"I think maybe I should do that," she said quietly. "Just once, before I die. To see how it feels. The world might like another Mozart. Do you think?"

"It doesn't matter right now," I said, even though nothing had ever mattered more, in the grand scheme of things.

She lifted her hands and took the envelope from me, cradling it as if it were something fragile.

"If you've been using any credit cards, give them to me now, and then go," I said.

A disturbing frisson ran through the orchestra. Martinez didn't seem to notice, but I did. The mathematical rhythm was off, the pitches ever so slightly discordant as their frequencies failed to line up in pleasing ratios. Something was wrong.

"Get out of here, *now*," I hissed, grabbing Martinez by the elbow and heaving her to her feet.

There was a shuffling down below, in the packed orchestra section. The planes of music from the stage were sliding apart, offset, the harmonies gliding further and further apart.

The shuffling got louder. Someone a few rows in front of us coughed, and whispers rose across the mezzanine. I dragged Martinez toward the door.

The music finally collapsed, jaggedly trailing into silence, the whispers from below becoming shouts and cries. We reached the door and I yanked on it only to find it barred from the other side.

That's okay, I thought. That's okay; a proper application of force—snap off the door handles, the screws will pop—

I tried to draw back to kick and almost fell, my foot impacting limply against the hinge like a soggy French fry.

The people in the mezzanine were staggering up now, climbing over each other, a faceless, clawing mass.

“Gonna get...trampled...” The voice sounded like mine, but I didn’t remember speaking. The voice was right, though—the rest of the audience was going to maul us trying to get to the door, the door that wouldn’t open —

Martinez lolled against me and started to sit down. I heaved her back up and half-threw us into the last row of seats, covering her body with mine. Someone kicked me in the head with a high heel as we went down. Someone else stepped on my hand.

I curled over Martinez’s limp form, pushing us as far under the row of seats as I could. The concert hall’s house lights had come on, but for some reason it felt darker than before. Maybe because I couldn’t open my eyes...

That was stupid. Of course I could open my eyes. Of course I could. I just needed to sleep for a moment first...

CHAPTER 34

CLACK, CLACK, CLACK.

I woke up still on the floor, but it was a different floor, and I couldn't move.

Clack, clack, clack.

I strained at pulling my eyelids up and managed a foggy strip of light.

Clack, clack, clack.

I pushed as hard as I could, willing my muscles to contract, to twitch, but nothing happened.

"It's a neuromuscular blocker," said a voice above me. "It paralyzes you. And besides that, you're trussed up like a Christmas turkey."

I managed to focus my eyes a bit. My wrists were on the floor in front of me, in irons. They looked like my arms, my hands, but felt completely divorced from my body, like someone else's limbs.

In the background were two large booted feet and an intricately carved walking stick.

Clack, clack, clack, went the meditation balls.

A stack of papers hit the ground in front of the feet: the documents and credit cards I'd had Tegan mock up.

"Seems you were planning to double-cross me," said the Lancer's voice. "I'm not into that."

Yeah.

“I would have killed you right off—I usually kill people who double-cross me. But you still have information I want.” *Clack, clack, clack.*

Halliday’s proof. Right.

“I’ll take great pleasure in breaking you.” He giggled like a hyena. “But I confess you’re not my top priority right now. You’ll have to wait. I just wanted to say hi.”

Oh. Oh, *shit.*

Martinez. He had Martinez, too. Of course he did—we hadn’t gotten out; he’d taken us both.

That hadn’t been part of the plan. She was supposed to get away before he caught me.

She was supposed to get away.

This was my fault. I had to protect her. I pushed my neurons to move a finger with no success. The helplessness sandbagged me. I had to be able to do—to do something—

I managed to make a sound in my throat, something like a sick rhinoceros.

“Oh? You have something to say?”

Don’t hurt her. Oh, God.

“Mathematics should be shared, don’t you agree?” the Lancer said carelessly. “Oh, I forgot. You’re only in this for the money. Playing both ends against the middle. You don’t care.” The meditation balls stopped, and he was suddenly a lot closer, half-crouching, half-sitting so his face was near mine. “People like you are the scum of humanity. You don’t care about the field, about what humanity can discover. You’re only in it for your payday. Perelman would weep.”

I would have liked to point out that he’d been planning on using Halliday’s proof for his own ends as well, and that he was almost certainly going to steal the fame and million-dollar prize from Martinez by convincing the world—and maybe even himself—that it was his own work. He was a delusional hypocrite.

But then, he wasn’t entirely wrong about me.

He stood back up. I pushed my vocal cords until I thought I would choke myself, straining to the breaking point, and managed a few unintelligible sounds.

“What was that?” said the Lancer. I couldn’t tell if he was mocking me or not.

“Weak...heart,” I got out. “Martinez...” The consonants slurred; I wasn’t sure if they were understandable.

“Does she,” said the Lancer, after an interminable pause. “How do you know?”

“Sh’told me,” I managed.

He crouched down again. “I think you’re lying. But it will be easy enough to check.”

Right. Computer skills. He’d get her medical records.

Hell, Martinez wasn’t young; with any luck she really would have a heart condition. But at least I’d bought her some time...time for my plan to work.

Time for Arthur to come for us.

Faith...

The Lancer pushed himself up and tapped his walking stick against one boot. “In the meantime, if you are telling the truth, then she thinks you’re chummy enough to share your health with each other. What, did you tell her you were going to protect her?” He snorted. “There’s no one you haven’t betrayed, is there?”

He wasn’t wrong about that, either.

“But I doubt our dear doctor is wise to that. She seems such a trusting sort. If you want so much for me to spare her ‘weak heart,’ if you two are such *good friends*, I know an excellent solution.”

He snorted with laughter again and called to someone in another language. Rough hands manhandled me, hoisting me up under my arms, dragging me. It hurt, more than it should have—oddly unspecific blobs of pain floating through my fried nervous system. It took a few minutes, but I got around to figuring that someone had kicked me in the face and ribs while I was out.

By the time I’d worked out that conclusion I was being shoved into a very solid-feeling chair. Chains clanked as they fastened me down.

“We’ll wait for the drugs to wear off a touch,” said the Lancer, from somewhere behind me. “After all, we want a show.”

I strove to move again, heaved like I was trying to pull a muscle, and managed to twitch my wrist on the arm of the chair. Metal bit into my skin, cold and unyielding.

The Lancer had started up with his meditation balls again; the sound traced out where he paced behind me. I wasn't keeping good track of time at the moment, but it wasn't very long before his men brought in Martinez.

She was walking under her own power, and aside from also being cuffed up, she didn't look any the worse for the wear. Apparently the Lancer had only felt the need to take out his anger on the person who had personally fucked him over. Thank God.

Martinez plopped herself down in a chair across from me, and the goons chained her in, just as they had done to me. She managed to sit in the manacles primly, somehow, as if she were about to take tea and cakes.

My muscles were responding now, a little bit, though twitching my fingers still felt like I was pushing through glue.

The *clack, clack, clack* approached my shoulder, and I felt the Lancer lean on the chair behind me. "Last chance," he said. "You really don't want us to touch her?"

I knew what was coming. I could take it, I hoped. As long as it bought us time.

Arthur will be coming. He will.

"You give her a heart attack, you'll never get your proof." My tongue was still thick and languid in my mouth, but the words had enough shape to make sense.

"Can I tell you a secret?" He leaned close, his breath hot on my ear. "I doubt you'll be a very good incentive. But I don't really care." He pushed off and walked away.

Yeah. I'd pissed him off. Big time.

And it wasn't going to work out so well for me.

"Is she all right?" came Martinez's grandmotherly voice.

"How nice that you care," said the Lancer. He'd retreated to a spot between us, leaning on his cane, the meditation balls going in his other hand. "Dr. Martinez, you've told me you won't part with certain information on a proof that—" he brayed his hyena laugh—"that I *know* you have. But I think we can change your mind." He gestured at me.

“We’re going to start by torturing your friend here, who so conveniently made herself available. If that doesn’t work, we’ll go out and find another one of your friends, or we’ll find your family, any family you have—children, grandchildren, newborn babies...do you want that?”

Martinez was silent.

“I said, do you want that?”

“I assumed the question was rhetorical,” she said. “Of course I don’t want that. It would be a most inhuman state. And if I did want it, I would have been spurred to do it myself, in all likelihood, so even if you suspected violent psychopathy on my part, there is evidence to the contrary.”

The Lancer stepped forward and spat on her. The globule smacked against her wrinkled cheek and slid down to dribble on her collar. Martinez twitched away from it in a gentle shudder, like she couldn’t believe the rudeness of kids nowadays. “If you don’t *want* it, then you’ll tell us what you know,” the Lancer sneered.

“You’re assuming that wanting one thing—or, in this case, wanting one thing to happen—precludes wanting, or not wanting, another thing more. In my hierarchy there is no contest. This power makes me unto a deity, and it has been struggle enough whether to share it with the world, but to share it with only those who would use it for evil—there is no decision. I will not be the one to create an evil god.”

“Poetic,” the Lancer said. “In that case, is there anything you wish to say to your friend? She’s about to be quite uncomfortable.”

Something *snicked* off to my left, sharply, and an arc of sparks flew at the edge of my peripheral vision.

Oh, *shit*.

Martinez looked past me. “I’m sorry for the actions of these men,” she said. “But not for my actions. They are only rational.”

The ironic part of it was, her logic made sense. In a wretched, soon-to-be-extremely-painful-for-me sort of way.

The *snick* sparked again, louder, right by my ear this time. Bits of heat tingled against my exposed skin where the sparks fell.

“Last chance,” said the Lancer.

I didn’t hear what Martinez said back, because the pain hit.

CHAPTER 35

I'D BEEN shot before. I'd been beat up before. In my various disreputable past jobs, I'd been blown up by airborne missiles, almost drowned, and fallen off the side of a mountain.

I'd never been tortured with a fifteen-thousand-volt electric charge before.

It wasn't only the pain, although that was unimaginable, an almost out-of-body nerve-shredding bonfire that refused to localize to where they'd thrust the leads against me. But more—each charge ripped through my flesh like it wanted to flay me, rending me apart and tearing me like paper...the world twisted into sick, impossible shapes, stretching until it snapped, and my brain flash-fried and crumbled until it was dust.

It took me some time to realize they had stopped, the searing burn pulsing through me even after they'd dropped the leads from my skin. My surroundings kept stuttering and hitching, like someone had taken handfuls of frames out of an animation. I was aware of the Lancer talking to Martinez, every third word piling up on the one before like he was a bad collage.

After a few minutes, the Lancer and his men cleared out, leaving us chained to our chairs. They probably wanted me to beg Martinez to tell, or something. They hadn't readministered the paralytic, but it didn't make a difference: my muscles popped and spasmed against each other, defying my attempts to marshal them. Even if I'd been able to move under my own power, however, the mathematics of our situation were dismal; the chains

wrapped my arms and legs with a depressing level of redundancy. The Lancer had wanted to make sure I didn't escape again, and he'd done a good job with the overkill.

"I can't tell him, you know," Martinez said after a few minutes. "It would be—it would be quite bad. I don't know what he would be able to do."

What he was able to do without it was frightening enough. The Lancer was going to go out and find anyone else in Martinez's life to hurt—friends, family, other mathematicians, Martinez herself once he knew what would be liable to kill her—until she capitulated. And capitulate she would, once our captor reached the variable named Sonya Halliday. Martinez had given up everything for Halliday, and she'd give up the proof as well, I felt sure. Their friendship was her zeroth axiom.

It was a race, then. "Is okay," I slurred. "I have a plan."

She raised her eyebrows. Her huge glasses were missing, I noticed, making her bones seem even finer and smaller than before. "I hope your plan does not involve being unchained, because if so, you are unlikely to be able to enact it."

"Doesn't," I said.

"Intriguing." She stared into space, considering as if this were a riddle: *Two prisoners, A and B, are chained in a room until A gives up information. B tells A not to worry, that she has a plan to escape. What is it?*

I was tired. So tired. "Gotta wait," I said. "That's the plan. Wait..."

Her brow furrowed, her lips pursing, trying to figure out the meaning in the punchline.

"People are coming to get us." I wasn't sure I said the words or only thought them. I was loopy. Why did everything hurt so much? "Hold out, Professor...they're coming. You have to hold out..." Who was I talking to? "They'll be here."

"How do you know?"

"Faith," I mumbled. *Faith...*

I remembered my earlier resolution, that I didn't need my past to decide who I wanted to be now. I could be the type of person who trusted, couldn't I? Why couldn't I decide to be that? The type of person who

trusted, and who protected an old woman from being hurt for as long as I needed to...

"I don't believe in faith," Martinez said, very primly. "It's the antithesis of evidence-based science."

She was right. But maybe I didn't need to believe in general—I only needed to believe in certain people. I could manage that.

Certain people. Arthur. Checker. Myself.

Myself most of all. I had to believe I had it in me, somewhere, to do the right thing when it came down to the wire. Otherwise, why keep existing at all? I had nothing else of value—*was* nothing else.

"Professor," I said. "Act like this bothers you. Okay? We need to make them draw it out..."

"I don't understand what you mean. Of course it bothers me. They're evil men, to be hurting you like that."

"They have to keep going," I tried to explain. "To keep going, on—on me, and not anyone else. Tell them you'll give them something if they stop, beg them, and then take it back. Convince them they're getting to you—"

There was a sound at the side of the room. The Lancer and his men, trooping back in. I wondered if they'd had cameras on us. Too late to worry about it now.

"Have you decided to share with the class yet, Dr. Martinez?" The Lancer leaned on his walking stick, pinning Martinez with his intense stare like she was a butterfly on a card. "Or shall we continue?"

Martinez looked at him and then back at me. I would have crossed my fingers, if I'd been able to move them right.

Her eyes had gone large, and they focused on mine. It was the first time she'd made eye contact with me. It jolted me—I didn't know what she meant by it.

"Please," she said to the Lancer, very slowly and softly. "Please stop this."

I let out a quiet breath. *Good girl. Convince them.*

"It's in your hands," the Lancer said. "Tell me what I want to know, and we'll stop."

“I—I can’t—”

The Lancer nodded to his friends behind me.

I might have screamed then. I wasn’t sure.



A FACE swam in front of me. I called someone’s name, but it wasn’t the right one.

The face resolved into the sallow features of the Lancer. His hand whipped out and smacked against something. Me. He’d smacked my cheek.

I couldn’t feel it.

My whole body was seizing, a thousand million tiny internal catastrophes as the nerves and muscles couldn’t figure out what to do anymore so twisted and screamed and died.

I tried to find Martinez, but my eyes wouldn’t focus that far away from me. I gave up.

Someone tilted a cup of water against my mouth until I choked on it. I tried to swallow, but the muscles barely obeyed. Nothing was working at all the way it was supposed to. My senses had collapsed in on themselves as if they’d inverted, every *x* and *y* switching until I didn’t know which way was up anymore.

Someone smacked me again, the *crack* of it ever so loud. I felt it that time. It stung. It might have split my skin.

I pondered that.

The Lancer was saying something to Martinez. Something about watching me die. Whether she really wanted to be responsible for that.

I thought you didn’t want to kill me, I tried to say. I still had something he wanted. Didn’t I?

As if he’d heard me, his breath came hot on my ear again. “I’d prefer you didn’t die, if you’d be so kind. But Dr. Martinez appears to be surprisingly sympathetic to your condition, and let’s just say...what you know is expendable, if it gets me what she knows.”

Expendable. I wasn't the only one who knew Halliday's proof. Professor Halliday did, for one thing, as well as Dr. Zhang and probably a handful of other people in the NSA at this point. And if the Lancer pried Martinez's work out of her, he might not even feel the need for Halliday's proof at all, because he'd have the bigger, better prize.

It was surprising, how fast my brain was able to make those connections.

Some vestige of adrenaline surged, and I tried to use it to evaluate myself, to see how close the Lancer was to...well, to killing me. It was a surreal place to be. My mind wandered too quickly, however, rendering no useful data.

The Lancer and his men were gone again. It had taken me a long time to realize that. Professor Martinez was trying to talk to me, but her words bounced against my eardrums as if they were nonsense syllables.

At least she was all right.

Wait, I remembered. I had to wait. What was I waiting for?

The Lancer came back in.

No, no, no, I'm not ready. I had to *wait*—

I tugged at my bonds weakly, involuntarily. The paralytic had worn off now, but it hardly mattered.

"Is there anything our resident double-crossing snake would like to share for posterity?" The Lancer was standing above me, jeering, leaning on his cane with both hands. "Any words of wisdom on always making the quick buck?"

A noise filtered through my consciousness, a very specific sort of shuffle-thump noise. A *very* specific sort of noise.

Holy shit.

"Six, twenty-eight, four ninety-six," I said. It came out in a weird, sing-song mumble. I felt drunk.

"What did you say?" demanded the Lancer.

There was another shuffle-thump, and a quickly quieted clatter. "Thirty," I murmured. "A hundred and forty. Twenty-four eighty..."

"Six thousand two hundred," said Professor Martinez, across from me. "And forty thousand six hundred forty."

“Yeah,” I said. “Yeah. They’re here.”

“Who’s here?” The Lancer’s voice climbed, unnerved. “What the fuck are you on about?”

“Natural numbers with a common abundancy.” Martinez’s voice had gone back to her prim abstraction, and it almost made me giggle to hear it. “When the ratio of the sum of the divisors to the number itself is the same for all of them. We call those numbers friends.”

“I’ve got some, too,” I said, and at that moment the DHS agents breached the room.

A truly terrifying few seconds followed—shouting and smoke and gunfire, and I couldn’t move, couldn’t duck, and neither could Martinez—and then the only shapes navigating through the smoke were black layers of body armor and helmets carrying MP5s and M4s at the ready.

Someone was trying to talk to me, an officer-agent-person with a rifle in one hand and his other hand touching my neck, searching out a pulse; he shouted to someone and then moved over to Martinez. There was a lot more movement, a lot of people hurrying and shouting “clear” and running back and forth, and I was glad I didn’t have to join in, but could just sit here and be still and in pain and cough every so often.

And then Arthur appeared next to me as if by magic, wearing a vest himself and gently unwinding the chains around my wrists. “Arthur,” I slurred. “You got my message.”

He leaned forward briefly so his forehead touched mine. “Yeah. We got your message.”

I tried to push myself up as soon as Arthur finished freeing me. He attempted to stop me with some nonsense about waiting for the paramedics, but when it became clear I was determined to ignore him he got an arm under me and helped me wobble upright while berating me gently for being stupid.

I mumbled something incoherent in response. His grip around my shoulders hurt, a lot, but I didn’t care.

One of the DHS agents was helping Martinez up. The little old professor looked around through the smoke-hazed air at all the black-clad men and women surrounding us, her eyes almost feverishly bright.

“Oh,” she said. “Hello.”

I had a moment to wonder what would happen now—if the NSA would insist on taking the proof from Martinez, if I'd screwed her over even worse by delivering us into the custody of the Feds—when she wobbled like a spent gyroscope and crumpled to the ground.

The agent helping her lurched, trying to catch her, but was too slow. She shouted for help and fell immediately to first-aid, pressing her fingers to Martinez's neck, bending forward to check for breathing. Several more agents bolted in, crowding around and hiding them from view.

"Jesus and Mary," said Arthur, his voice empty in my ear. "He hurt her bad?"

"He didn't hurt her at all," I said.

CHAPTER 36

I REFUSED to go get treated by the DHS paramedics, even when the agents threatened me and told me they needed a debriefing. “They captured us. They tortured me. That’s it,” I said. “Now I’m leaving, and I swear to God I will shoot anyone who tries to stop me.”

“You need anything else from her, you can ask me,” Arthur said to someone, very firmly. I glimpsed the friendly Agent Jones in full tac gear—oddly enough, at Arthur’s words she started yelling at people and clearing a path for us. That would have to be a mystery for another day.

I pushed at Arthur. “Go with Martinez. Make sure she’s okay.”

“Russell, you need—”

“I’ll be fine. Look after the professor. And tell the DHS if they try to bury either of you in a hole, I’ll destroy them.”

“We aren’t the bad guys, Ms. Russell,” Agent Jones said beside me, an odd expression on her face, and then she was gone.

Arthur tried to argue with me, but I insisted, and he finally gave in and helped me out to his car, where Pilar jumped out and came around to support me on the other side. “Cas! Oh my God. What happened? Are you okay?”

“No,” I said.

“Call Doc Washington,” said Arthur to Pilar. “She treated Cas before. Tell her what happened. You guys gonna be all right?”

“Give me a gun,” I said.

Pilar pulled out her little CZ and handed it to me. Keeping it pointed down, I noticed. Arthur must have talked to her.

I took the safety off and tucked it in my belt. “We’ll be fine. There’s nobody after us anymore, unless the NSA decides to live up to their reputation.”

“Think they got what they wanted,” Arthur said softly. “Ain’t think they’re interested in you. You’re not important to ’em.”

Something in my chest eased. Not that I thought Arthur would have given me away, but still. “Thanks.”

Pilar helped me fall into the passenger seat of Arthur’s rental and then went around to drive, taking a moment to pull the seat all the way forward and adjust the mirrors before she got started. “Where to?”

I thought for a minute. If the NSA was still tracking us, I didn’t want to give away any of my bolt holes. “Checker’s, if he’s okay with it. Arthur’s doctor can meet us there.”

Pilar looped on a phone headset and called Checker first—he said to get our butts over to him right now before I keeled over dead (his words, as relayed by Pilar). Then she called someone who was presumably Arthur’s doctor friend. “Hi, this is Pilar Velasquez—yes, with Arthur. Yes, everything’s okay. We need your help, though—do you remember Cas Russell?”

There was a pause, and then Pilar snorted. “Yes, her. No, she hasn’t been shot this time. Um. I shouldn’t laugh. She doesn’t seem in immediate danger, but I think she was beat up pretty bad. Cas, what’d they do to you?”

“Fifteen thousand volts,” I said. “It was invigorating. *Electrifying*, even.”

The smile faded from Pilar’s face. “Oh my God,” she said. “Dr. W.—okay, you heard that? All right. Can you meet us at 10942 Venado Street in Van Nuys? Yes. Great. Thank you.”

She hung up and bit her lip. Then she said, “I’m sorry I laughed. Are you in a lot of pain?”

“Only everywhere,” I said.

“We were all really worried about you, you know,” she said, keeping her eyes on the road. “Really worried. Checker was going out of his head.

You've got people who really care about you."

I'd never quite been able to figure Pilar out. "Why are you telling me this?" I asked.

"Because I don't think you know," she answered.



ARTHUR'S DOCTOR friend was a no-nonsense African-American woman with the bedside manner of a know-it-all engineer. She swept in and immediately started giving me an earful over getting electrocuted. I tried to tell her I hadn't done it on purpose, but she ran right over me.

"At least you managed to avoid bullets this time," she scolded. "For heavens' sake, those things aren't good for you."

"Yeah," I said. "I've heard that."

She patched me up, and also helped me cut out the Feds' transmitter, which I'd recovered from the desert and shoved under the skin of my thigh to ensure they'd be able to find me—well, once Arthur told them what had happened and directed them to look for the signal. Then the doctor gave me some painkillers, lost an argument with me about going to the hospital for a CT scan, and told us to make sure Arthur gave her a call. We promised.

"Are you really okay?" asked Checker, who had been hovering to the side of his living room while she treated me.

"Yeah, I will be," I said. My skin still felt numb in places, and every so often a muscle would twitch without me telling it to. But my ability to evaluate my own injuries seemed to be back, and as far as I could sense, none of it was anything that wouldn't heal up after a few painful weeks. I intended to spend as much of that time as I could drunk.

After you get the proof from Martinez?

I closed my eyes and pushed the thought away. I shouldn't want it anymore, should I? This was like one of those old-style fables, the ones with the morals. I had chased the proof beyond reason, and it had led me to ruin. I should feel noble about letting it go and preach about the power of friendship over selfish desires. Or something.

I couldn't do it.

I'd fucked up, badly, but volunteering to give up the chance to know Martinez's proof was too high a penance. Too much to ask. Just the prospect felt like offering to saw off one of my own limbs. Something in me was broken, and willingly staying broken forever wasn't something I could do, however much my guilt told me I might deserve it.

I still needed the proof, no matter what Martinez or the NSA or the DHS had to say about it.

But to salve my guilty conscience, I promised myself I would get it without going too far this time. I could bide my time. See what the Feds' play was.

A muscle in my leg twitched, then my right hand. Stupid muscles. God, I needed to sleep.

I vaguely heard Checker and Pilar talking in hushed tones, but my head felt wrapped in layers of cotton. Narcotic painkillers. Right.

An itch in my brain—something else, something I had to remember to do. I dredged through the layers of cotton wool. “Hey. Checker.”

He moved over and touched my hand. “I’m here.”

“The pyro dude. D.J. I don’t think he was there. I don’t think they got him.”

He paused for a long moment. “Okay. Thanks.”

“You want to talk about it?”

He squeezed my hand briefly. “Maybe another time. Go to sleep now.”

I drifted off on Checker's couch, and for once I didn't dream. God bless the good drugs.



WHEN I woke up, Checker and Pilar were absent, but Arthur was sitting across the room working on a laptop. When I made a noise and sat up, he hurried over, snagging the bottle of painkillers and a glass of water off the end table. “Here. How you feeling?”

I waved off the pills. Not that I didn't need them—everything ached, and my muscles felt stitched onto my bones as if I were a poor version of Pinocchio. But I wanted to be awake. “Been better,” I said. “I guess I’ve

also been worse, though.” I leaned back on the couch. Sitting up was about as far as I felt I could manage for the moment. “What’s going on? What was wrong with Martinez? Is she okay now?”

Arthur shoved his hands in his pockets and stared down at a point on the floor for a long second. “She has a brain tumor,” he said.

I couldn’t process the words. “What?”

“Looks like she’s had it for a while,” added Arthur. “She got...the docs say she only got a little longer now—days, maybe weeks. Unlikely she’ll wake up again.”

“No,” I whispered. The word choked me. No. *No*.

Arthur cocked his head at me in frank surprise, and I dropped my eyes. I hadn’t been worried about Martinez, not really. Even after everything.

Guilt flamed up in my gut, and I wished I were a better person. Or one who didn’t have a conscience at all, because navigating life would be so much easier if I didn’t, and I could say *fuck the world* and rail at the loss of the proof that would save me, the unfairness of it, with vicious, screaming anger. I wanted to curl up in despair and drink myself into a stupor, because this was the end—the end of hope, the end of one great shining beacon of knowledge that a single woman had selfishly and unilaterally decided to hide, and it wasn’t *right*, and when I thought of Martinez it wasn’t grief that welled up but a white-hot fury as if she’d reached into my brain and crippled me herself. Because for all intents and purposes, she had. And fuck if I was going to mourn her, and fuck what my friends thought.

Except...

Arthur was the one who always made me want to be better. I’d spent a lot of time since this job started with a slow fire of resentment building, wanting to walk away from him, and then when I’d called, he’d come, no questions asked. And now here he was. Even after everything I’d done.

I remembered my loopy resolution while being tortured, the euphoric feeling that the decision was so easy, to be a better person. To trust. In the cold and sober light of day, it felt ludicrous.

But my loopy, pain-drunk brain had been proven correct in the end, hadn’t it? I’d stuck the transmitter back in me and Arthur had mobilized hell and high water in the form of government agencies to come track me

down, without even knowing Martinez had been taken, too. My trust might have been stupid, but it had also been right. He'd come for me.

Fuck. The proof that would make me whole was gone, and in its place were these odd illogical human relationships that didn't make any sense and that I'd been doing my level best to raze to the ground before this.

"I'm sorry," I blurted, before I could rethink the words. "For everything." It wasn't what I wanted to say, but my world was disintegrating, every hope folding into emptiness, and maybe all I could do was try to salvage what was left.

If it was salvageable. If I hadn't succeeded in destroying it, in my rampage to dig for something a dying woman insisted on taking beyond my reach anyway.

Arthur took a minute to answer, using the time to pull up a chair and sit next to me. "Ain't gonna lie," he said quietly. "I was PO'd. It's a two-way street, Russell, and you went off deliberate to work against us. When things went south on you, you could've gotten Martinez hurt bad." He cleared his throat. "But you didn't. And I forgive you. 'Cause that's what friends do. Besides, I think you got all the comeuppance you need already. Just...don't do it again."

I looked at my hands. I wasn't sure I could guarantee that. Not because I didn't want to, but because I knew I would fuck up again, sometime, someday. Probably sooner than I'd bet on. "I'll try," I said. The promise sounded hollow.

He gusted out a sigh. "You got a start on it. You did call us."

I had, I thought.

"It's the first time, you know. First time you asked for help."

I wanted to protest that it wasn't true, that we'd worked together plenty of times before, on a variety of cases. But he was right—it had always been out of convenience. Because he happened to be around at the time, and was competent to give me a hand.

Not because I needed help.

"Shame it took such an extreme," said Arthur. "But it's a start. We'll make a real person out of you yet." The tension hadn't gone away, but a shadow of a smile had crept into his voice.

I didn't know what to say to that, but something inside my chest eased. Not much, but a little.

"Got things squared with the Feds, by the way," Arthur continued. "The credit's Sonya's, to be honest. She kept her cool and held her ground, and I think they still want her cooperating enough that they'll smooth anything over, long as we didn't hurt any good guys. She told them they had to leave you be, no two ways about it, and your friend Agent Jones said okay, she'd make it all go away."

Halliday had protected me. Despite me going after her friend. I wondered if she knew everything, knew what I'd done.

Maybe she was trying for forgiveness, like Arthur. He did have that effect on people.

Or maybe she'd only defended me because she still wanted me to come work with her, help give advancements to her precious field. She didn't know it was impossible. She didn't know I was...damaged.

Forever, now.

"Martinez," I said in a low voice. "Is there any chance she'll come out of it?"

He hesitated. "They ain't hopeful." He took a breath. "Russell, they say she...they say one of the symptoms is hallucinations. Personality changes. They say she might've been thinking things that ain't real."

He said it very gently.

I wasn't sure if Checker had told him what the proof might've meant to me—wasn't sure if Checker himself had drawn the right conclusion, to be honest. But Arthur was nothing if not perspicacious. And a good guesser.

Hallucinations.

He was saying...he was saying the proof Martinez had written, *the* proof, might've been nothing but nonsense. She might have burned all her senseless scribbles in a fit of madness and then stolen her friend's legitimate work because her illness had imagined demons.

It was too much. I didn't even know what to feel. Nothing was real. "You don't think she ever had the proof," I murmured. The words sounded robotic. Mechanical.

I wasn't looking at him, but I felt him shrug. "Don't know. Likely we'll never know."

The room suddenly felt too close. I pushed myself up. My equilibrium wobbled as I teetered onto my feet, but I found my balance.

"Russell," said Arthur, standing as well.

"Yeah?"

"Dr. Martinez. If you want to visit with her, they're letting us."

"What's the point?" I asked.

"Say goodbye?"

"I didn't know her that well." And she'd destroyed me. She'd given me hope, then snatched it away.

"Up to you," Arthur said after a moment.

I said okay. But only because I owed him.



MARTINEZ LOOKED positively tiny in the hospital bed, old and desiccated and almost alien, like a mummy who had been dug up and wrapped in white sheets. I stood with Arthur by her bedside. Halliday was sitting in a chair next to her head, holding one of her limp hands.

I'd forgotten to ask Arthur what I was supposed to do. It felt awkward to say so now.

"Hey," I said to Halliday. She nodded at me. She didn't appear angry with me. Only sad. Maybe Arthur hadn't told her what I'd done.

I looked down at Martinez. If she'd had the proof, she'd destroyed the only copy, and now had the temerity to take it with her in death. If she'd never had it...

The roller coaster of emotion I'd been on the past few days rippled through me like an echo, then drained away, leaving me empty.

If she'd never had the proof, there was a god somewhere up there laughing at us.

CHAPTER 37

RITA MARTINEZ died thirteen days later, without ever waking up. I went to the funeral because I had a feeling Arthur expected me to. I filed it in the category of trying to be a better person.

Professor Halliday spoke. I didn't pay attention to what she said; I let the words sail over me and echo against the walls of the church.

I recognized a few Feds at the service, and numbly wondered if they were there to make sure no one gave anything away. The ever-helpful Agent Jones approached me afterward, out on the lawn under a copse of decorative trees.

"Ms. Russell," she said, nodding at me. She had a paper cup of punch in her hand. There were refreshments inside, which I'd passed on in favor of the flask in my pocket and the cocktail of narcotics I was still on.

"Agent Jones," I answered. I didn't know or care what she wanted. I felt detached from everything. Numb.

"I just want you to know, um..." She glanced behind her and straightened her jacket. It was very odd behavior. I watched blandly. "I want you to know, I worked with one of you before, and you don't have to worry. Whatever holes there have been in you and your colleagues' stories, I took care of it on our end."

I opened my mouth, but she held up a hand to forestall me.

"I know you can't confirm it, and that's okay. I just didn't want you to worry. I started taking care of everything as soon as I realized. I understand how hard it can be when you're working alone with no

resources.” She straightened and gave me a sharp nod, almost as if she wanted to salute. I felt faintly ridiculous. “If you need anything else, just let me know.”

“Sure,” I said. “Thanks.”

She paused as if she were about to say something else, then nodded again and turned on her heel to stride off.

Well, *that* had been weird.

Professor Halliday replaced her a few minutes later, wandering over as if she hadn’t chosen to seek me out. She reached over and ran a hand along the bark of one of the decorative trees, as if she had come over expressly to do that rather than to speak to me.

A normal person probably would have made small talk about the service, or her eulogy. It felt like too much effort to me.

“Arthur told me everything,” Halliday said after a minute.

“Oh.” I didn’t know what she expected me to say to that. If she was angry with me, there wasn’t much I could do to dissuade her. I wasn’t even sure it would be right to dissuade her.

Her eyes gleamed with unshed tears. “It wasn’t ideal, but—at least she died here, among friends, instead of alone and on the run. I think I was wrong, to say we shouldn’t find her.”

What a stunningly illogical sentiment. “Professor, you do realize I was responsible for getting your friend drugged and kidnapped and threatened with torture, right?”

Her expression twitched. “You didn’t intend for any of that to happen.”

I couldn’t believe it. Her attitude was akin to telling a drunk driver she had no responsibility for plowing into a bus load of schoolchildren. Certain things were foreseeable consequences, even if you didn’t intend them.

But I was too tired to argue with her over why she should hate me.

“There’s something...” She stared intently at the tree. “I’d like to go over something with you, if you don’t mind. Can we meet tomorrow?”

I had no good reason to refuse her, and saying yes seemed like the kind of thing a better person would do, so I did.

We met in a coffee shop near the university. She'd already written out her proof again for the NSA, and with the Lancer in custody, the DHS had dropped her protective detail. It was just the two of us.

Halliday ordered a tea first and spent a long time sipping it. "Xiaohu pled guilty to espionage. Two years suspended sentence. He went home to his wife and children."

"Oh," I said. "Good. Your doing?"

She made a noncommittal motion. I recalled Agent Jones's words at the funeral, her assurances that she was "taking care of things" on my behalf. It made me uncomfortable, just how much I didn't know about what was going on.

"Do you believe..." Halliday put down her cup, straightened it, and folded her hands on the table. "Do you believe she had the proof?"

"Who knows?" For God's sake, this better not be what she had invited me here to talk about. "Do you think so?"

"I don't know. My intuition had always been that they are unequal, or perhaps that the question is formally independent. We in the field tend to predict—well, I had always considered inequality a near-certainty, though I would have entertained the idea of unprovability. Considering the possibility of equality is..." She raised a hand and then let it fall to her lap. "It boggles the mind."

"She either had the proof or not," I said. "It doesn't matter how you feel about it."

"I know." She paused. "The funny part about you saying such a thing is—for all her talk of rationality, Rita didn't want the truth in this case. She wanted a particular outcome more badly than any other. She was one of the only people I knew who felt equality was likely, let alone wanted it to be true with such fervency—she would daydream about it, and dream about being the one to find the answer herself. Discovering they were unequal or independent would change very little; discovering they were equal would shatter mathematics, and I think part of her wanted that. The sensation. To be a Gödel or Zermelo."

"Because she wouldn't get a sensation from *any* proof regarding P versus NP?" I said sarcastically.

Halliday chuckled. “True. She never could work in moderation. A person of extremes, was Rita. Either she felt the reality was quite different, or...”

Something inside me folded in on itself, twisting and tight. “You don’t think she ever solved it, not for real. You think it was her tumor talking.”

Halliday hesitated. Then, instead of answering, she reached into her bag, pulled out a stack of papers, and held it out to me.

“What’s this?”

“PDE proofs. Several.”

I took the sheaf of pages and started skimming the first one. Partial differential equations, as Halliday had said. “What does this have to do with anything?”

“They were in a safe deposit box in Rita’s name. She left most of her things to me. I’ve been going through it all, but I only found these yesterday.”

“They’re stuff she hadn’t published yet?” I didn’t understand why Halliday would feel such a need to show them to me.

“PDEs weren’t her field. Nor mine. Are they correct?”

I turned the page, kept skimming. “Yeah. So far.”

She nodded. “I thought so. But they aren’t her style, are they? They... meander. Rita’s work was always tight. Dense.”

I looked up. “Professor, stop dancing around. What are you trying to say?”

Her hands were tight against the edge of the table, her forehead knitted. “If she truly found a constructive proof showing P equals NP ...it’s what she feared for mathematics. That one of the consequences would be the ability to quickly prove anything one could quickly verify, and thus large swathes of mathematics as a creative field would go obsolete.”

My heart started beating faster. “You’re suggesting she wrote an automated theorem prover.” Which would only have been possible if her proof had been correct.

Halliday’s mouth twitched upward in the slightest of smiles. “She never did like differential equations. I think it would have tickled her, to steal some of their thunder.”

Dr. Martinez had struggled with whether to share her new knowledge with the world. It made sense that she'd at least used it to spread other knowledge, even if she'd destroyed the programs she'd used to do it.

Destroyed. And Martinez herself dead. If she *had* ever had the proof, it was gone with her, a state functionally equivalent to one in which she'd never discovered it at all.

Even if her result was true, I would never be able to replicate it myself, and without it, I was stuck. Forever. Locked in a place bare of mathematical intuition. An idiot savant missing the one skill that counted.

Halliday stood. "I'm going to send the PDE proofs around. Maybe she stole them, too, and someone will take credit. Or maybe she just wanted to make a point, to prove something, by learning the field herself."

Prove something. It sounded so simple, for something so entirely out of reach.



I WENT to see Checker a few days after Martinez's funeral. I'd spent most of the last couple weeks asleep on the good pills, until the black market prescription drugs Dr. Washington had given me had run out. My hands still got twitchy every so often, but less every day.

I hadn't had a chance to talk to Checker yet. Or maybe I'd been avoiding it. I'd seen him at the funeral; he'd come even though he'd never met Rita Martinez—he and Pilar had been there with Arthur, dressed in black and looking suitably somber. I'd made a crack about not knowing he owned a suit, and he'd made one back about not knowing I owned soap. Touché.

I found him in the Hole, as usual, and shut the door to lean against it, my hands shoved in my jacket pockets. I'd apologized to Arthur, but Checker...he'd been mad at me, too, but for entirely different reasons.

Reasons that were a lot more complicated. Reasons that wouldn't go away with an apology, even if Checker shared Arthur's bizarre and stunning depth of forgiveness.

Reasons I didn't, when it came down to it, think I should apologize for at all.

I didn't know how to start. "You came for me," I said finally.

Checker smiled slightly. "Of course we did."

"Thank you."

He pushed back from his desktop to face me, as if I were acting so strange that if he didn't handle me carefully I might explode. "We always will, you know."

I couldn't remember having friends before Arthur and Checker. I wondered if I had. I had no precedent to guide me, no confidence in my ability to navigate a relationship that involved caring about someone else. "You're right," I said baldly. "About my memory."

"I know." The smile had disappeared, and his voice had gone cautious, neutral.

"I'm acknowledging it, just this once. Because you should know I made a decision." I spoke very evenly. "I'm not going to look into it. And I'm asking you not to, either."

"Why?" he asked after a beat.

"I don't need a reason," I said. "It's my memory. My life. I'm—I'm asking you." I wet my lips. "Leave it alone. Please."

I couldn't read Checker's expression. He took his time in answering, and when he did his words were quiet and slow, as if he were placing them carefully one after the other. "I hear what you're saying. I do. But I—I can't." His voice cracked. "Because—whatever happened to you might be influencing you to say that. We've seen it before, and even the possibility—we need to find out why this happened to you. You could be in danger. You could have other enemies out there. I'm not going to sit by and let you ignore this, even if you—even if you ask me to. I can't." He held my eyes, pleading, almost anguished.

I stayed leaning against the door for a long moment.

I didn't know what to do.

"You're going to do this even without my permission, then?" I said.

"Cas, don't make me—"

"I'm not making you," I said quietly.

"Can we talk about this? Please?"

"No." I was sure. I knew what I wanted.

What I needed. What my broken, already-damaged brain needed.

To keep it all locked away.

I said to Checker, "Tell me, right now, that you're going to let this go."

He squeezed his eyes shut for a long moment. "I can't."

I felt numb.

I turned and put a hand on the doorknob. "If you're in trouble, I'll come," I said, not looking back at him. "Otherwise, call me when you change your mind."

I pushed open the door and headed out of the Hole without looking back.

Checker called after me, imploring, frantic, but I didn't acknowledge him. His pleas echoed in my head until I fell asleep that night and dreamt of half-real monsters who smothered me in false memory and distorted realities.

When I woke only a few hours later, I stumbled for the darkened streets, seeking the strongest chemical remedies money and back alleyways could offer.

THE END

THANK YOU FOR READING

IF YOU'RE interested in some exciting notes on the math used for Cas's latest adventure, turn the page! Otherwise:

- Want new release announcements? Join my mailing list at www.slhuang.com.
- If you're inclined to leave a review of this book somewhere online, I am always hugely grateful. Thank you so much to anyone who chooses to do so.
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Above all, thank you so much for joining me for *Root of Unity*. Now turn the page for those exciting math notes, a list of my other fiction, and a whole lot more thanks that need saying...

AFTERWARD: A NOTE ON THE MATH IN THIS BOOK

If $P=NP$, then the world would be a profoundly different place than we usually assume it to be. There would be no special value in “creative leaps,” no fundamental gap between solving a problem and recognizing the solution once it’s found. Everyone who could appreciate a symphony would be Mozart; everyone who could follow a step-by-step argument would be Gauss; everyone who could recognize a good investment strategy would be Warren Buffett. (Scott Aaronson, [“Reasons to Believe”](#))

EVEN THOUGH I knew this book would focus on cryptography and complexity theory, I wasn’t sure I was going to use P vs. NP for it until I read a paper by Professor Scott Aaronson. After all, P vs. NP has been done in fictional media enough times for it to start feeling cliché, and even though the problem fascinates me—as it does many—I thought I might want to choose something a bit less overdone.

But as Professor Aaronson points out in the paper [“NP-complete Problems and Physical Reality,”](#) most people who talk about the idea of P equaling NP focus only on the most minor results of it. And though in fiction it’s much more likely for P to equal NP than the opposite—after all, as Halliday says near the end of this book, inequality would change

very little, so it is somewhat less interesting for fiction—the problem has rarely been imagined in a way that explores all the possible consequences of equality:

Even many computer scientists do not seem to appreciate how different the world would be if we could solve NP-complete problems efficiently. I have heard it said, with a straight face, that a proof of $P = NP$ would be important because it would let airlines schedule their flights better, or shipping companies pack more boxes in their trucks! One person who did understand was Gödel. In his celebrated 1956 letter to von Neumann (see [69]), in which he first raised the P versus NP question, Gödel says that a linear or quadratic-time procedure for what we now call NP-complete problems would have “consequences of the greatest magnitude.” For such a procedure “would clearly indicate that, despite the unsolvability of the Entscheidungsproblem, the mental effort of the mathematician in the case of yes-or-no questions could be completely replaced by machines.”

But it would indicate even more. If such a procedure existed, then we could quickly find the smallest Boolean circuits that output (say) a table of historical stock market data, or the human genome, or the complete works of Shakespeare. It seems entirely conceivable that, by analyzing these circuits, we could make an easy fortune on Wall Street, or retrace evolution, or even generate Shakespeare’s 38th play. For broadly speaking, that which we can compress we can understand, and that which we can understand we can predict. Indeed, in a recent book [12], Eric Baum argues that much of what we call ‘insight’ or ‘intelligence’ simply means finding succinct representations for our sense data. On his view, the human mind is largely a bundle of hacks and heuristics for this succinct-representation problem, cobbled together over a billion years of evolution. So if we could solve the general

case—if knowing something was tantamount to knowing the shortest efficient description of it—then we would be almost like gods.

I read this and then immediately emailed one of my critique partners. “‘Gods,’ Elaine!” I shouted through email. “GODS!”

I’m not sure I did the problem justice myself, but I certainly enjoyed writing about it, so I have no regrets.

I should point out that the reference to Dr. Martinez mathematically composing a Mozart is in direct homage to how inspired I was by Aaronson (I read all of his writing on P vs. NP after finding that paper, including the post containing the quote at the beginning of this afterward). I could have chosen any artistic field for Martinez to claim access to, but Professor Aaronson’s Mozart comparison was one of the most thrilling metaphors I’ve ever come across when it comes to the P vs. NP problem. Thrilling and terrifying!



I ALSO must give tremendous thanks to Aaron Koch, Nidhal Bouaynaya, Roman Shterenberg, and Radu F. Babiceanu for writing a paper called, [“An Encryption Algorithm Based on the Prime Roots of Unity”](#) (IPCSIT vol. 31, 2012), in which they propose an alternate form of encryption to RSA that uses prime roots of unity. In other words, a method very like the theory attributed to Sonya Halliday in this book.

I’d already written in a bit about Halliday’s encryption work using roots of unity—entirely randomly, and mostly so I could use my very cool title for a book that is more about “unity” in the friendship sense than in the mathematical one. Then, one day, I was bopping around reading math papers, as one does, and I came across the work of Koch, Bouaynaya, Shterenberg, and Babiceanu.

And I almost *died*.

Here was something I had *made up* as technobabble for a *completely fictional algorithm* and it turned out it was part of a real proof!

I was so excited by this that I tweaked the dialogue between Cas and Halliday so it sounded more like the details of the real mathematics. I am indebted to Koch, Bouaynaya, Shterenberg, and Babiceanu for their research, and I hope they don't mind that I have attributed their proof (or some similar proof, in the alternate universe of *Russell's Attic*) to an entirely fictional character.

If anyone would like to read their proof, it is online at <http://www.ipcsit.com/vol31/011-ICIII2012-C0029.pdf>.

FICTION BY SL HUANG

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Novels

[Zero Sum Game](#)

[Half Life](#)

[Root of Unity](#)

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[Rio Adopts a Puppy](#)

[Ladies' Day Out](#)

Other Works

[Hunting Monsters](#) [Book Smugglers Publishing]

[Fighting Demons](#) [Book Smugglers Publishing]

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ONCE AGAIN, my sister remains my biggest support and Cas Russell's biggest fan. The amount of time she has poured into cheering on these books is too big for me ever to repay—fate needs to dump a rainbow winged pony on her doorstep even to begin to balance the scales.

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Root of Unity's book cover is my favorite so far in the series, and that's once again thanks to the brilliance of my jaw-dropping cover designer, [Najla Qamber](#). My editor for the books continues to be the wonderful [Anna Genoese](#), who polishes my paragraphs to a blinding shine each and every time. These excellent ladies deserve all the credit in the world for their talents.

For the third time, David Wilson took valuable time from his very busy life to dialect-check for me and to answer my dumb follow-up linguistic questions. He's a marvelous person with a staggering intellect, and the world really needs more Davids in it. Needless to say, everything I got right is thanks to him, and any errors are my own.

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SL HUANG majored in mathematics at MIT. The program did not include training to become a superpowered assassin-type. Sadly.

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