

The Art of Alchemy

by Ted Kosmatka

Since 2005, Ted Kosmatka has sold stories to numerous literary and science fiction magazines. His story “The Prophet of Flores” will appear in two different best-of-the-year anthologies this year and his fiction has been translated into Hebrew and Russian. You can find a complete bibliography of his works at *tedkosmatka.com*, but if you’re looking for pictures of his adorable baby daughter Morgan, you’ll have to look elsewhere.

If you’re looking for adorable kiddies in your fiction right now, Mr. Kosmatka’s *F&SF* debut is not for you. (There’s one elsewhere in this issue.) This story’s a hardboiled science fiction thriller, and a good one at that.

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Sometimes when I came over, Veronica would already be naked. I’d find her spread out on a lawn chair behind the fence of her townhome, several sinewy yards of black skin visible to second-story windows across the park. She’d scissor her long legs and raise a languid eyelid.

“You have too many clothes on,” she’d say.

And I’d sit. Run a hand along smooth, dark curves. Curl pale fingers into hers.

The story of Veronica is the story of this place. These steel mills, and the dying little city-states around them, have become a part of it somehow—Northwest Indiana like some bizarre, composite landscape we’ve all consented to believe in. A place of impossible contrasts. Cornfields and slums and rich, gated communities. National parkland and industrial sprawl.

Let it stand for the rest of the country. Let it stand for everything.

On cold days, the blast furnaces assemble huge masses of white smoke across the Lake Michigan shoreline. You can still see it mornings, driving I-90 on the way to work—a broad cumulous mountain range rising from the northern horizon, as if we were an alpine community, nestled beneath shifting peaks. It is a terrible kind of beauty.

Veronica was twenty-five when we met—just a few years younger than I. She was brilliant, and beautiful, and broken. Her townhome sat behind gates on the expensive side of Ridge Road and cost more than I made in five years. Her

neighbors were doctors, and lawyers, and business owners. From the courtyard where she lay naked, you could see a church steeple, the beautiful, dull green of oxidized copper, rising over distant rooftops.

The story of Veronica is also the story of edges. And that's what I think about most when I think of her now. The exact line where one thing becomes another. The exact point where an edge becomes sharp enough to cut you.

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We might have been talking about her work. Or maybe she was just making conversation, trying to cover her nervousness; I don't remember. But I remember the rain and the hum of her BMW's engine. And I remember her saying, as she took the Randolph Street exit, "His name is Voicheck."

"Is that his first name, or last?"

"It's the only one he gave me."

We took Randolph down to the Loop, and the Chicago skyline reared up at us. Veronica knew the uptown streets. The restaurant on Dearborn had been her choice of location—a nice sixty-dollar-a-plate Kazuto bar that stayed open till two a.m. Trendy, clubby, dark. Big name suppliers sometimes brought her there for business dinners, if they were also trying to sleep with her. It was the kind of place wealthy people went when they wanted to get drunk with other wealthy people.

"He claims he's from Poland," she said. "But the accent isn't quite right. More Baltic than Slavic."

I wondered at that. At how she knew the difference.

"Where's he based out of?" I asked.

"Ukraine, formerly, but he sure as hell can't go back now. Had a long list of former this, former that. Different think tanks and research labs. Lots of burned bridges."

"Is he the guy, or just the contact?"

"He's playing it like he's the guy, but I don't know."

She hit her signal and made a left. The rain came down harder, Chicago

slick-bright with streetlights and traffic. Green lions on the right, and at some point, we crossed the river.

“Is he bringing it with him?” I asked.

“I don’t know.”

“But he said he was actually bringing it?”

“Yeah.” She looked at me. “He said.”

“Jesus.”

Her face wore a strange expression in the red glow of dashboard light. It took me a moment to place it. Then it hit me: in the year and a half I’d known her, this was the first time I’d ever seen her scared.

* * * *

I met her at the lab. I say “lab” and people imagine white walls and sterile test tubes, but it’s not like that. It’s mostly math I do, and something close to metallurgy. All of it behind glass security walls. I check my work with a scanning electron microscope, noting crystalline lattices and surface structure micro-abrasions.

She walked through the door behind Hal, the lab’s senior supervisor.

“This is the memory metals lab,” Hal told her, gesturing as he entered.

She nodded. She was young and slender, smooth dark skin, a face that seemed, at first glance, to be more mouth than it should. That was my initial impression of her—some pretty new-hire the bosses were showing around. That’s it. And then she was past me, following the supervisor deeper into the lab. At the time, I had no idea.

I heard the supervisor’s voice drone on as he showed her the temper ovens and the gas chromatograph in the next room. When they returned, the super was following her.

I looked up from the lab bench and she was staring at me. “So you’re the genius,” she said.

That was when she pointed it at me. The look. The way she could look at you with those big dark eyes, and you could almost see the gears moving—her full mouth pulled into a sensuous smile that wanted to be more than it was. She smiled like she knew something you didn't.

There were a dozen things I could have said, but the nuclear wind behind those eyes blasted my words away until all that was left was a sad kind of truth. I knew what she meant. "Yeah," I said. "I guess that's me."

She turned to the supervisor. "Thank you for your time."

Hal nodded and left. It took me a moment to realize what had just happened. The laboratory supervisor—my direct boss—had been dismissed.

"Tell me," she said. "What do you do here?"

I paused for three seconds before I spoke, letting myself process the seismic shift. Then I explained it.

She smiled while I talked. I'd done it for an audience a dozen times, these little performances. It was practically a part of my job description since the last corporate merger made Uspar-Nagoi the largest steel company in the world. I'd worked for three different corporations in the last two years and hadn't changed offices once. The mill guys called them white-hats, these management teams that flew in to tour the facilities, shaking hands, smiling under their spotless white hardhats, attempting to fit their immediate surroundings into the flowchart of the company's latest international acquisitions. Research was a prime target for the tours, but here in the lab, they were harder to spot since so many suits came walking through. It was hard to know who you were talking to, really. But two things were certain. The management types were usually older than the girl standing in front of me. And they'd always, up till now, been male.

But I explained it like I always did. Or maybe I put a little extra spin on it; maybe I showed off. I don't know. "Nickle-titanium alloys," I said. I opened the desiccator and pulled out a small strip of steel. It was long and narrow, cut into almost the exact dimensions of a ruler.

"First you take the steel," I told her, holding out the dull strip of metal. "And you heat it." I lit the Bunsen burner and held the steel over the open flame. Nothing happened for ten, twenty seconds. She watched me. I imagined what I must look like to her at that moment—blue eyes fixed on the warming steel, short hair jutting at wild angles around the safety goggles I wore on my forehead. Just

another technofetishist lost in his obsession. It was a type. Flame licked the edges of the dull metal.

I smiled and, all at once, the metal moved.

The metal contracted muscularly, like a living thing, twisting itself into a ribbon, a curl, a spring.

“It’s caused by micro- and nano-scale surface restructuring,” I told her. “The change in shape results from phase transformations. Martensite when cool; Austenite when heated. The steel remembers its earlier configurations. The different phases want to be in different shapes.”

“Memory metal,” she said. “I’ve always wanted to see this. What applications does it have?”

The steel continued to flex, winding itself tighter. “Medical, structural, automotive. You name it.”

“Medical?”

“For broken bones. The shape memory alloy has a transfer temp close to body temp. You attach a plate to the break site, and body heat makes the alloy want to contract, thereby exerting compressive force on the bone at both ends of the fracture.”

“Interesting.”

“They’re also investigating the alloy’s use in heart stents. A cool-crushed alloy tube can be inserted into narrow arteries where it’ll expand and open once it’s heated to blood temperature.”

“You mentioned automotive.”

I nodded. Automotive. The big money. “Imagine that you’ve put a small dent in your fender,” I said. “Instead of taking it to the shop, you pull out your hairdryer. The steel pops right back in shape.”

She stayed at the lab for another hour, asking intelligent questions, watching the steel cool and straighten itself. Before she left, she shook my hand politely and thanked me for my time. She never once told me her name. I watched the door close behind her as she left.

Two weeks later she returned. This time, without Hal.

She drifted into the lab like a ghost near the end of my shift.

In the two weeks since I'd seen her, I'd learned a little about her. I'd learned her name, and that her corporate hat wasn't just management, but upper management. She had an engineering degree from out east, then Ivy League grad school by age twenty. She gave reports to men who ran a corporate economy larger than most countries. She was somebody's golden child, fast-tracked to the upper circles. The company based her out of the East Chicago regional headquarters but occasionally flew her to Korea, India, South Africa, to the latest corporate takeovers and the constant stream of new facilities that needed integration. She was an organizational savant, a voice in the ear of the global acquisition market. The multinationals had long since stopped pretending they were about actually making things; it was so much more Darwinian than that now. The big fish ate the little fish, and Uspar-Nagoi, by anyone's standards, was a whale. You grow fast enough, long enough and pretty soon you need an army of gifted people to understand what you own, and how it all fits together. She was part of that army.

"So what else have you been working on?" she asked.

When I heard her voice, I turned. Veronica: her smooth, pretty face utterly emotionless, the smile gone from her full mouth.

"Okay," I said. And this time I showed her my real tricks. I showed her what I could really do. Because she'd asked.

Martensite like art. A gentle flame—a slow, smooth origami unfolding.

We watched it together. Metal and fire, a thing I'd never shown anyone before.

"This is beautiful," she said.

I showed her the butterfly, my little golem—its only movement a slow flexing of its delicate steel wings as it passed through phase changes.

"You made this?"

I nodded. "There are no mechanical parts," I told her. "Just a single solid

sheet of steel.”

“It’s like magic,” she said. She touched it with a delicate index finger.

“Just science,” I said. “Sufficiently advanced.”

We watched the butterfly cool, wings flapping slowly. Finally, it began folding in on itself, cocooning, the true miracle. “The breakthrough was micro-degree shifting,” I said. “It gives you more design control.”

“Why this design?”

I shrugged. “You heat it slow, an ambient rise, and it turns into a butterfly.”

“What happens if you heat it fast?”

I looked at her. “It turns into a dragon.”

* * * *

That night at her townhome, she took her clothes off slow—her mouth prehensile and searching. Although I was half a head taller, I found her legs were as long as mine. Strong, lean runner’s legs, calf muscles bunched like fists. Afterward we lay on her dark sheets, a distant streetlight filtering through the blinds, drawing a pattern on the wall.

“Are you going to stay the night?” she asked.

I thought of my house, the empty rooms and the silence. “Do you want me to?”

She paused. “Yeah, I want you to.”

“Then I’ll stay.”

The ceiling fan above her bed hummed softly, circulating the air, cooling the sweat on my bare skin.

“I’ve been doing research on you for the last week,” she said. “On what you do.”

“Checking up on me?”

She ignored the question and draped a slick arm across my shoulder. “Nagoi has labs in Asia running parallel to yours. Did you know that?”

“No.”

“From years before the Uspar merger. Smart alloys with chemical triggers instead of heat; and stranger things, too. A special copper-aluminum-nickel alloy that’s supposed to be triggered by remote frequency. Hit a button on a transmitter, and you get phase change by some kind of resonance. I didn’t understand most of it. More of your magic steel.”

“Not magic,” I said.

“Modern chemistry grew out of the art of alchemy. At what point does it start being alchemy again?”

“It’s always been alchemy, at the heart of it. We’re just getting better at it now.”

“I should tell you,” she said, curling her fingers into my hair. “I don’t believe in interracial relationships.” That was the first time she said it—a thing she’d repeat often during the next year and a half, usually when we were in bed.

“You don’t believe in them?”

“No,” she said.

In the darkness she was a silhouette, a complication of shadows against the window light. She wasn’t looking at me, but at the ceiling. I studied her profile—the rounded forehead, the curve of her jaw, the placement of her mouth—positioned not just between her nose and chin, but also forward of them, as if something in the architecture of her face were straining outward. She wore a steel-gray necklace, Uspar-Nagoi logo glinting between the dark curve of her breasts. I traced her bottom lip with my finger.

“You’re wrong,” I said.

“How’s that?”

“I’ve seen them. They exist.”

I closed my eyes and slept.

* * * *

The rain was still coming down, building puddles across the Chicago streets. We pulled onto Dearborn and parked the car in a twenty-dollar lot. Veronica squeezed my hand as we walked toward the restaurant.

Voicheck was standing near the door; you couldn't miss him. Younger than I expected—pale and broad-faced, with a shaved head, dark glasses. He stood outside the restaurant, bare arms folded in front of his chest. He looked more like a bouncer than any kind of scientist.

“You must be Voicheck,” Veronica said, extending her hand.

He hesitated for a moment. “I didn't expect you to be black.”

She accepted this with only a slight narrowing of her eyes. “Certain people never do. This is my associate, John.”

I nodded and shook his hand, thinking, *typical Eastern European lack of tact*. It wasn't racism. It was just that people didn't come to this country knowing what *not* to say; they didn't understand the context. On the floor of the East Chicago steel plant, I'd once had a Russian researcher ask me, loudly, how I could tell the Mexican workers from the Puerto Ricans. He was honestly curious. “You don't,” I told him. “Ever.”

A hostess walked us down dark carpet, past rows of potted bamboo, and seated us at a table near the back. The waitress brought us our drinks. Voicheck took his glasses off and rubbed the bridge of his nose. The lenses were prescription, I noticed. Over the last decade, surgery had become so cheap and easy in the States that only anachronists and foreigners wore glasses anymore. Voicheck took a long swig of his Goose Island and got right to the point. “We need to discuss price.”

Veronica shook her head. “First, we need to know how it is made.”

“That information is what you'll be paying for.” His accent was thick, but he spoke slowly enough to be understood. He opened his hand and showed us a small, gray flash drive, the kind you'd pay thirty dollars for at Best Buy. His fingers curled back into a fist. “This is data you'll understand.”

“And you?” Veronica asked.

He smiled. “I understand enough to know what it is worth.”

“Where is it from?”

“Donets’k, originally. After that, Chisinau laboratory, until about two years ago. Now the work is owned by a publicly traded company which shall, for the time being, remain nameless. The work is top secret. Only a few people at the company even know about the breakthrough. I have all the files saved. Now we discuss price.”

Veronica was silent. She knew better than to make the first offer.

Voicheck let the silence draw out. “One hundred thirteen thousand,” he said.

“That’s a pretty exact number,” Veronica said.

“Because that’s exactly twice what I’ll entertain as a first counter offer.”

Veronica blinked. “So you’ll take half that?”

“You offer fifty-six thousand five hundred? My answer is no, I am sorry. But here is where I rub my chin; and because I’m feeling generous, I tell you we can split the difference. We are negotiating, no? Then one of us does the math, and it comes out to eighty-five thousand. Is that number round enough for you?”

“I liked the fifty-six thousand better.”

“Eighty-five minimum.”

“That is too much.”

“What, I should let you steal from me? You talked me down from one hundred thirteen already. I can go no further.”

“There’s no way we—”

Voicheck held up his hand. “Eighty-five in three days.”

“I don’t know if we can get it in three days.”

“If no, then I disappear. It is simple.”

Veronica glanced at me.

I spoke for the first time. “How do we even know what we’d be paying for? You expect us to pay eighty-five grand for what’s on some flash drive?”

Voicheck looked at me and frowned. “No, of course not.” He opened his other fist. “For this, too.” He dropped something on the table. Something that looked like a small red wire.

“People have died for this.” He gestured toward the red wire. “You may pick it up.”

I looked closely. It wasn’t one wire; it was two. Two rubber-coated wires, like what you’d find behind a residential light switch. He noticed our confusion.

“The coating is for protection and to make it visible,” he said.

“Why does it need protection?”

“Not it. You. The coating protects you.”

Veronica stood and looked at me. “Let’s go. He’s been wasting our time.”

“No, wait,” he said. “Look.” He picked up one of the wires. He lifted it delicately by one end—and the other wire lifted, too, rising from the table’s surface like some magician’s trick.

I saw then that I’d been wrong; it was not two wires after all, but one.

“The coating was stripped from ten centimeters in the middle,” Voicheck said. “So you could see what was underneath.”

But in the dim light, there was nothing to see. I bent close. Nothing at all. In the spot where the coating had been removed, the thread inside was so fine that it was invisible.

“What is it?” I asked.

“An allotrope of carbon, Fullerene structural family. You take it,” he said.

“Do tests to confirm. But remember, is just a neat toy without this.” He held out the flash drive. “This explains how the carbon nanotubes are manufactured. How they can be woven into sheets, what lab is developing the technique, and more.”

I stared at him. “The longest carbon nanotubes anybody has been able to make are just over a centimeter.”

“Until now,” he said. “Now they can be miles. In three days you come back. You give me the eighty-five thousand, I give you the data and information about where the graphene rope is being developed.”

Veronica picked up the wire. “All right,” she said. “Three days.”

My father was a steelworker, as was his father before him.

My great-grandfather, though, had been here before the mills. He’d been a builder. He was here when the Lake Michigan shoreline was unbroken sand from Illinois to St. Joseph. He built Bailey Cemetery around the turn of the century—a great stone mausoleum in which some of the area’s earliest settlers were buried. Tourists visit the place now. It’s on some list of historic places, and once a summer, I take my sister’s daughters to see it, careful to pick up the brochure.

There is a street in Porter named after him, my great-grandfather. Not because he was important, but because he was the only person who lived there. It was the road to his house, so they gave it his name. Now bi-levels crowd the street. He was here before the cities, before the kingdoms of rust and fire. Before the mills came and ate the beaches.

I try to imagine what this part of Indiana would have been like then. Woods, and wetlands, and rolling dunes. It must have been beautiful.

Sometimes I walk out to the pier at night and watch the ore boats swing through the darkness. From the water, the mill looks like any city. Any huge, sprawling city. You can see the glow of a thousand lights; you hear the trains and the rumble of heavy machines. Then the blast furnace taps a heat, a false-dawn glow of red and orange—flames making dragon’s fire on the rolling Lake Michigan waves. Lighting up the darkness like hell itself.

* * * *

The drive back to Indiana was quiet. The rain had stopped. We drove with the windows half-open, letting the wind flutter in, both of us lost in thought.

The strand—that's what we'd call it later—was tucked safely into her purse.

"Do you think it's for real?" she asked.

"We'll know tomorrow."

"You can do the testing at your lab?"

"Yeah," I said.

"Do you think he is who he says he is?"

"No, he's not even trying."

"He called it a graphene rope, which isn't quite right."

"So?" I said.

"Clusters of the tubes *do* naturally align into ropes held together by Van der Waals forces. It's the kind of slip only somebody familiar with the theory would make."

"So he's more familiar with it than he lets on?"

"Maybe, but there's no way to know," she said.

The next day I waited until the other researchers had gone home, and then I took the strand out of my briefcase and laid it on the lab bench. I locked the door to the materials testing lab and energized the tensile machine. The fluorescent lights flickered. It was a small thing, the strand. It seemed insignificant as it rested there on the bench. A scrap of insulated wiring from an electrician's tool box. Yet it was a pivot point around which the world would change, if it was what it was supposed to be. If it was what it was supposed to be, the world had changed already. We were just finding out about it.

The testing took most of the night. When I finished, I walked back to my office and opened a bottle I kept in the bottom drawer of a filing cabinet. I sat and sipped.

It's warm in my office. My office is a small cubby in the back room of the lab, a thrown-together thing made by wall dividers and shelves. It's an office

because my desk and computer sit there. Otherwise it might be confused with a closet or small storage room. File cabinets line one side. There are no windows. To my left, a hundred sticky notes feather the wall. The other wall is metal, white, magnetic. A dozen refrigerator magnets hold calendars, pictures, papers. There is a copy of the lab's phone directory, a copy of the lab's quality policy, and a sheet of paper on which the geometry of crystal systems is described. The R&D directory of services is there, too, held to the wall by a metal clip. All the phone numbers I might need. A picture of my sister, blonde, unsmiling, caught in the act of speaking to me over a paper plate of fried chicken, the photo taken at a summer party three years ago. There is an Oxford Instruments periodic table. There's also a picture of a sailboat. Blue waves. And a picture of the Uspar-Nagoi global headquarters, based out of London.

Veronica finally showed up a few minutes past midnight. I was watching the butterfly as she walked through the door.

"Well?" she asked.

"I couldn't break it."

"What do you mean?"

"I couldn't get a tensile strength because I couldn't get it to fail. Without failure, there's no result."

"What about the other tests?"

"It took more than 32,000 pounds per square inch without shearing. It endured 800 degrees Fahrenheit without a measurable loss of strength or conductivity. Transmission electron microscopy allowed for direct visualization. I took these pictures." I handed her the stack of printed sheets. She went through them one by one.

Veronica blinked. She sat. "What does this mean?"

"It means that I think they've done it," I said. "Under impossibly high pressures, nanotubes can link, or so the theory holds. Carbon bonding is described by quantum chemistry orbital hybridization, and they've traded some sp^2 bonds for the sp^3 bonds of diamond."

She looked almost sad. She kissed me. The kiss was sad. "What are its uses?"

“Everything. Literally, almost everything. A great many things steel can do, these carbon nanotubes will do better. It’s super-light and super-strong, perfect for aircraft. This material moves the fabled space elevator into the realm of possibility.”

“There’d still be a lot of R&D necessary—”

“Yes, of course, it will be years down the road, but eventually the sky’s the limit. There’s no telling what this material will do, if it’s manufactured right. It could be used for everything from suspension bridges to spacecraft. It could help take us to the stars. We’re at the edge of a revolution.”

I looked down at the strand. After a long time, I finally said what had been bothering me for the last sixteen hours. “But why did Voicheck come to you?” I said. “Of all places, why bring this to a steel company?”

She looked at me. “If you invent an engine that runs on water, why offer it to an oil company?” She picked up the strand. “Only one reason to do that, John. Because the oil company is certain to buy it.”

She looked at the red wire in her hand. “If only to shut it down.”

That night we drank. I stood at the window on the second story of her townhome and looked out at her quiet neighborhood, watching the expensive cars roll by on Ridge Road. The Ridge Road that neatly bisects Lake County. Land on the south, higher; the land to the north, low, easing toward urban sprawl, and the marshes, and Lake Michigan. That long, low ridge of land represented the glacial maxim—the exact line where the glacier stopped during the last ice-age, pushing all that dirt and stone in front of it like a plow, before it melted and receded and became the Great Lakes—and thousands of years later, road builders would stand on that ridge and think to themselves how easy it would be to follow the natural curve of the land; and so they built what they came to build and called it the only name that would fit: Ridge Road. The exact line, in the region, where one thing became another.

I wrapped the naked strand around my finger and drew it tight, watching the bright red blood well up from where it contacted my skin—because in addition to being strong and thin, the strand had the property of being *sharp*. For the tests, I’d stripped away most of the rubber coating, leaving only a few inches of insulation at the ends. The rest was exposed strand. Invisible.

“You cut yourself,” Veronica said. She parted her soft lips and drew my finger into her mouth.

The first time I’d told her I loved her, it was an accident. In bed, half asleep, I’d said it. Good night, I love you. A thing that was out of my mouth before I even realized it—a habit from an old relationship come rising up out of me, the way every old relationship lives just under the skin of every new one. All the promises. All the possibilities. Right there under the skin. I’d felt her stiffen beside me, and an hour later, she nudged me awake. She was sitting up, arms folded across her breasts, as defensive as I’d ever seen her. I realized she hadn’t slept at all. “I heard what you said.” There was anger in her voice, and whole stratus of pain.

But I denied it. “You’re hearing things.”

Though of course it was true. What I’d said. Even if saying it was an accident. It had been true for a while.

The night after I tested the strand, I lay in bed and watched her breathe. Blankets kicked to the floor.

Light from the window glinted off her necklace, a thin herringbone pattern—some shiny new steel, Uspar-Nagoi emblem across her beautiful dark skin. I caressed the herringbone plate with my finger, such an odd interlinking of metal.

“They gave this to you?”

She fingered the necklace. “They gave one to all of us,” she said. “Management perk. Supposed to be worth a mint.”

“The logo ruins it,” I said. “Like a tag.”

“Everything is tagged, one way or another,” she said. “I met him once.”

“Who?”

“The name on the necklace.”

“Nagoi? You met him?”

“At a facility in Frankfurt. He came through with his group. Shook my hand. He was taller than I thought, but his handshake was this flaccid, aqueous thing,

straight-fingered, like a flipper. It was obvious he loathed the Western tradition. I was prepared to like him, prepared to be impressed, or to find him merely ordinary.”

She was silent for so long I thought she might have fallen asleep. When she finally spoke, her voice had changed. “I’ve never been one of those people who judged a person by their handshake,” she said. “But still ... I can’t remember a handshake that gave me the creeps like that. They paid sixty-six billion for the Uspar acquisition. Can you imagine that much money? That many employees? That much power? When his daughter went through her divorce, the company stock dropped by two percent. His daughter’s divorce did that. Can you believe that? Do you know how much two percent is?”

“A lot.”

“They have billions invested in infrastructure alone. More in hard assets and research facilities, not to mention the mills themselves. Those assets are quantifiable and linked to actuarial tables that translate into real dollars. Real dollars which can be used to leverage more takeovers, and the monster keeps growing. If Nagoi’s daughter’s divorce dipped the share price by two percent, what do you think would happen if a new carbon-product competitor came to market?”

I ran a finger along her necklace. “You think they’ll try to stop it?”

“Nagoi’s money is in steel. If a legitimate alternative reached market, then each mill he owned, each asset all across the world, would suddenly be worth less. Billions of dollars would blink out of existence.”

“So what happens now?”

“We get the data. I write my report. I give my presentation. The board suddenly gets interested in buying a certain company in Europe. If that company won’t sell, Uspar-Nagoi buys all the stock and owns them anyway. Then shuts them down.”

“Suppression won’t work. The Luddites never win in the long run.”

She smiled. “The three richest men in the world have as much money as the poorest forty-eight nations,” she said. “Combined.”

I watched her face.

She continued. "The yearly gross product of the world is something like fifty-four trillion dollars, and yet there are millions of people who are still trying to live on two dollars a day. You trust business to do the right thing?"

"No, but I trust the market. A better product will always find its way to the consumer. Even Uspar-Nagoi can't stop that."

"You only say that because you don't understand how it really works. That might have been true a long time ago. The Uspar-Nagoi board does hostile takeovers for a living, and they're not going to release a technology that will devalue their core assets."

Veronica was silent.

"Why did you get into steel?" I asked. "What brought you here?"

"Money," she said. "Just money."

"Then why haven't you told your bosses about Voicheck?"

"I don't know."

"Are you going to tell them?"

"No, I don't think I am."

There was a long pause.

"What are you going to do?"

"Buy it," she said. "Buy Voicheck's data."

"And then what? After you've bought it."

"After I've bought it, I'm going to post it on the Internet."

* * * *

The drive to meet Voicheck seemed to take forever. The traffic was stop and go until we reached Halsted, and it took us nearly an hour to reach downtown Chicago.

We parked in the same twenty-dollar lot and Veronica squeezed my hand again as we walked toward the restaurant.

But this time, Voicheck wasn't standing outside looking like a bouncer. He wasn't looking like anything, because he wasn't there. We waited a few minutes and went inside. We asked for the same table. We didn't speak. We had no reason to speak.

After a few minutes, a man in a suit came and sat. He was a gray man in a gray suit. He wore black leather gloves. He was in his fifties, but he was in his fifties the way certain breeds of athletes enter their fifties—broad, and solid, and blocky-shouldered. He had a lantern jaw and thin, sandy hair receding from a wide forehead. The waitress came and asked if he needed anything to drink.

“Yes, please,” the man said. “Bourbon. And oh, for my friends here, a Bailey's for him, and what was it?” He looked at Veronica. “A Coke, right?”

Veronica didn't respond. The man's accent was British.

“A Coke,” the man told the waitress. “Thank you.”

He smiled and turned toward us. “Did you know that bourbon was the official spirit of the U.S. by act of Congress?”

We were silent.

“That's why I always used to make a point of drinking it when I came to the States. I wanted to enjoy the authentic American experience. I wanted to drink bourbon like Americans drink bourbon. But then I discovered an unsettling secret in my travels.” The man took something from the inside pocket of his suit jacket and set it on the table. Glasses. Voicheck's glasses—the frames bent into an unnatural position, both prescription lenses shattered.

The man caressed the twisted frames with his finger. “I discovered that Americans don't really drink bourbon. A great many Americans have never so much as tasted it. So then why is it the official spirit of your country?”

We had no opinion. We were without opinion.

“Would you like to hear what I think?” The man said. He bent close and spoke low across the table. “I've developed a theory. I think it was a lie all along. I

think someone in your Congress probably had his hand in the bourbon business all those years ago, and sales were flagging; so they came up with the idea to make bourbon the official spirit of the country as a way to line their own pockets. Would you like to hear something else I discovered in my travels? No? Well, I'll tell you anyway. I discovered that I don't care much, one way or the other, if that's how it happened. I discovered that I *like* bourbon. And I feel like I'm drinking the most American drink of them all, because your Congress said so, lie or not. The ability to believe a lie can be an important talent. You're probably wondering who I am."

"No," Veronica said.

"Good, then you're smart enough to realize it doesn't matter. You're smart enough to realize that if I'm here, it means that your friend isn't coming back."

"Where is he?" Veronica asked.

"I can't say, but rest assured that wherever he is, he sends his regrets."

"Are you here for the money?"

"The money? I couldn't care less about your money."

"Where's the flash drive?" Veronica asked.

"You mean this?" The man held the gray flash between leathered finger and thumb, then returned it to the breast pocket of his neat gray suit. "This is the closest you're going to get to it, I'm afraid. Your friend seemed to think it belonged to him. I disabused him of that misconception."

"What do you want?" Veronica asked.

"I want what everyone wants, my dear. But what I'm here for today—what I'm being paid to do—is to tie up some loose ends. You can help me."

Silence. Two beats.

"Where is the strand?" he asked.

"He never gave it to us."

The man's gray eyes looked pained. Like a father with a wayward child. "I'm

disappointed," he said. "I thought we were developing some trust here. Do you know what loyalty is?"

"Yes."

"No, I don't think you do. Loyalty to your company. Loyalty to the cause. You have some very important people who looked after you, Veronica. You had some important friends."

"You're from Uspar-Nagoi?"

"Who did you think?"

"I..."

"You have embarrassed certain people who have invested their trust in you. You have embarrassed some very important people."

"That wasn't my intention."

"In my experience, it never is." He spread his hands. "Yet here we are. What were you planning on doing with the data once you obtained it?"

"I don't know what you're talking about."

The pain returned to the man's eyes. He shook his head sadly. "I'm going to ask you a question in a moment. If you lie to me, I promise you." He leaned forward again. "I promise you that I will make you regret it. Do you believe that?"

Veronica nodded.

"Good. Do you have the strand with you?"

"No."

"Then this is what is going to happen now," he said. "We're going to leave. We're going to drive to where the strand is, and you're going to give it to me."

"If I did have it somewhere, and if I did give it to you, what happens then?"

"Probably you'll have to look for another job, I can't say. That's between you and your company. I'm just here to obtain the strand."

The man stood. He laid a hundred-dollar bill on the table and grabbed Veronica's arm. The way he grabbed her arm, he could have been a prom date—just a gentleman walking his lady out the door. Only I could see his fingers dug deep into her flesh.

I followed them out, walking behind them. When we got near the front door, I picked up one of the trendy bamboo pots and brought it down on the man's head with everything I had.

The crash was shocking. Every head in the restaurant swiveled toward us. I bent and fished the flash drive from his breast pocket. "Run," I told her.

We hit the night air sprinting.

"What the fuck are you doing?" she screamed.

"Voicheck is dead," I told her. "We were next."

Veronica climbed behind the wheel and sped out of the parking lot just as the gray man stumbled out the front door of the restaurant.

* * * *

The BMW was fast. Faster than anything I would have suspected. Veronica drove with the pedal to the floor, weaving in and out of traffic. Pools of light ticked past.

"They'll still be coming," she said.

"Yeah."

"What are we going to do?"

"We have to stay ahead of them."

"How do we do that? Where do we go?"

"We get through tonight, and then we worry about the rest."

"We can hop a flight somewhere," she said.

“No, what happens tonight decides everything. That strand is our only insurance. Without the strand, we’re dead.”

Her hands tightened on the steering wheel.

“Where is it?” I asked.

“At my house.”

Veronica kept the accelerator floored. “I’m sorry I got you into this,” she said.

“Don’t be.”

We were almost to her house when Veronica’s forehead creased. She took the turn onto Ridge, frowning. She looked confused for a moment, then surprised. Her hand went to her neck. It happened so quickly.

I had time to notice her necklace, gone flat-gray. There was an instant of recognition in her eyes before the alloy phase-changed—an instant of panic, and then the necklace shifted, writhed, herringbone plate tightening like razor wire. She gasped and let go of the wheel, clutching at her throat. I grabbed the wheel with one hand, trying to grab her necklace with the other. But already it was gone, tightened through her skin, blood spilling from her jugulars as she shrieked. Then even her shrieks changed, gurgling, as the blade cut through her voice box.

I screamed and the car spun out of control. The sound of squealing tires, and we hit the curb hard, sideways—the crunch of metal and glass, world trading places with black sky, rolling three times before coming to a stop.

* * * *

Sirens. The creak of a spinning wheel. I looked over, and Veronica was dead. Dead. That look, gone forever—gears in her eyes gone silent and still. The Uspar-Nagoi logo slid from her wound as the necklace phase changed again, expanding to its original size. I thought of labs in Asia, and parallel projects. I thought of necklaces, Veronica saying, *they gave one to all of us*.

I climbed out of the wreck and stood swaying. The sirens closer now. I sprinted the remaining few blocks to her house.

When I got to her front door, I tried the knob. Locked. I stood panting.

When I caught my breath, I kicked the door in. I walked inside, up the stairs.

The strand was in Veronica's jewelry box on her dresser. I glanced around the room; it was the last time I'd stand here, I knew, the last time I'd be in her bedroom. I saw the four-poster bed where we'd lain so often, and the grief came down on me like a freight train. I did my best to push it away. Later. Later, I'd deal with it. When there was time. I closed my eyes and saw Veronica's face.

Coming back down the stairs, I stopped. The front door was closed. I didn't remember closing it.

I stood silent, listening.

The first blow knocked me over the chair.

The gray man came, open hands extended, smiling. "I was going to be nice," he said. "I was going to be quick. But then you hit me with a pot."

Some flash of movement, and his leg swung, connecting with the side of my head. "Now I'm going to take my time."

I tried to climb to my feet, but the world swam away, off to the side. He kicked me under my right armpit, and I felt ribs break.

"Come on, stand up," he said. I tried to breathe. Another kick. Another.

I pulled myself up the side of the couch. He caught me with a chipping blow to the face. My lip split wide open, blood pouring onto Veronica's white carpet. His leg came up, connecting with my ribs again. I felt another snap. I collapsed onto my back, writhing in agony. His leg rose and fell as I tried to curl in on myself—some instinct to protect my vital organs. He landed a solid kick to my face and my head snapped back. The world went black.

He was crouching over me when I opened my eyes. That smile.

"Come on," he said. "Stand up."

He dragged me to my feet and slammed me against the wall. A right hand like iron pinned me to the wall by my throat.

"Where is the strand?"

I tried to speak, but my voice pinched shut. He smiled wider, turning an ear toward me. "What's that?" he said. "I can't hear you."

Some flutter of movement and the other hand came up. He laid the straight razor against my cheek. Cold steel. "I'm going to ask you one more time," he said. "And then I'm going to start cutting slices down your face. I'm going to do it slow, so you can feel it." He eased up on my windpipe just enough for me to draw a breath.

"Now tell me, where is the strand?"

I looped the strand around his wrist. "Right here," I said, and pulled.

There was almost no resistance. The man's hand came off with a thump, spurting blood in a fountain. He dropped the razor to the carpet. He had time to look confused. Then surprised. Like Veronica. He bent for the razor, reaching to pick it up with his other hand, and this time I hooked my arm around his neck, looping the chord tight—and pulled again. Warmth. Like bathwater on my face. He slumped to the floor.

I picked up the razor and limped out the front door.

* * * *

Eighty-five grand buys you a lot of distance. It'll take you places. It'll take you across continents, if you need it to. It will introduce you to the right people.

There is no carbon-tube industry. Not yet. No monopoly to pay or protect. And the data I downloaded onto the Internet is just starting to make news. Nagoi still comes for me—in my dreams, and in my waking paranoia. A man with a razor. A man with steel in his fist.

Already Uspar-Nagoi stock has started to slide as those long thinkers in the investment sphere gaze into the future and see a world that might, just maybe, be made of different stuff. Uspar-Nagoi made a grab for that European company, but it cost them more than they ever expected to pay. And the carbon project was buried, just as Veronica said it would be. Only now the data is on the net, for anyone to see.

Carbon has this property: it bonds powerfully and promiscuously to itself. In one form, it is diamond. In another, it builds itself into structures we are just beginning to understand. We are not smarter than the ones who came before

us—the ones who built the pyramids and navigated oceans by the stars. If we've done more, it's because we had better materials. What would de Vinci have done with polycarbon? Seven billion people in the world. Maybe now we find out.

Sometimes at night when sleep won't come, I think of what I said to Veronica about alchemy. The art of turning one thing into another. That maybe it's been alchemy all along.