THE CARTESIAN THEATER, by Robert Charles Wilson

Grandfather was dead but still fresh enough to give useful advice. So I rode transit out to his sanctuary in the suburbs, hoping he could help me solve a problem, or at least set me on the way to solving it myself.

I didn't get out this way much. It was a desolate part of town, flat in every direction where the old residences had been razed and stripped for recycling, but there was a lot of new construction going on, mostly aibot hives. It was deceptive. You catch sight of the towers from a distance and think: *I wonder who lives there?* Then you get close enough to register the colorless concrete, the blunt iteration of simple forms, and you think: *Oh, nobody's home*.

Sure looked busy out there, though. All that hurry and industry, all that rising dust—a long way from the indolent calm of Doletown.

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At the sanctuary an aibot custodian seven feet tall and wearing a somber black waistcoat and matching hat led me to a door marked PACZOVSKI—Grandfather's room, where a few of his worldly possessions were arrayed to help keep his sensorium lively and alert.

He needed all the help he could get. All that remained of him was his neuroprosthetic arrays. His mortal clay had been harvested for its biomedical utilities and buried over a year ago. His epibiotic ghost survived but was slurring into Shannon entropy, a shadow of a shade of itself.

Still, he recognized me when I knocked and entered. “Toby!” his photograph called out.

The photo in its steel frame occupied most of the far wall. It smiled reflexively. That was one of the few expressions Grandfather retained. He could also do a frown of disapproval, a frown of anxiety, a frown of unhappiness, and raised eyebrows meant to register surprise or curiosity, although those last had begun to fade in recent months.

And in a few months more there would be nothing left of him but the picture itself, as inert as a bust of Judas Caesar (or whatever—history's not my long suite).

But he recognized the bottle of Sauvignon blanc I took out of my carrypack and placed on the rutted surface of an antique table he had once loved. “That's the stuff!” he roared, and, “Use a coaster, for Christ's sake, Toby; you know better than that."

I turned down his volume and stuck a handkerchief under the sweating bottle. Grandfather had always loved vintage furniture and fine wines.

"But I can't drink it,” he added, sketching a frown of lament: “I'm not allowed."

Because he had no mouth or gut. Dead people tend to forget these things. The bottle was strictly for nostalgia, and to give his object-recognition faculties a little kick. “I need some advice,” I said.

His eyes flickered between me and the bottle as if he couldn't decide which was real or, if real, more interesting. “Still having trouble with that woman...?"

"Her name is Lada."

"Your employer."

"Right."

"And wife."

"That too," I said. "Once upon a time."

"What's she done now?"

"Long story. Basically, she made me an accessory to an act of ... let's say, a questionable legal and ethical nature."

"I don't do case law any more." Grandfather had been a trial lawyer for an uptown firm back when his heart was still beating. "Is this problem serious?"

"I washed off the blood last night," I said.

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Six weeks ago Lada Joshi had called me into her office and asked me if I still had any friends in Doletown.

"Same friends I always had," I told her truthfully. There was a time when I might have lied. For much of our unsuccessful marriage Lada had tried to wean me away from my Doletown connections. It hadn't worked. Now she wanted to start exploiting them again.

Her office was high above the city deeps. Through the window over her shoulder I could see the spine of a sunlit heat-exchanger, and beyond that a bulbous white cargodrome where unmanned aircraft buzzed like honey-fat bees.

Lada herself was beautiful and ambitious but not quite wealthy, or at least not as wealthy as she aspired to be. Her business, LadajoshiTM, was a bottom-tier novelty-trawling enterprise, one of hundreds in the city. I had been one of her stable of Doletown stringers until she married me and tried to elevate me socially. The marriage had ended in a vending-machine divorce after six months. I was just another contract employee now, far as Lada was concerned, and I hadn't done any meaningful work for weeks. Which was maybe why she was sending me back to Doletown. I asked her what the deal was.

She smiled and tapped the desktop with her one piece of expensive jewelry, a gold prosthetic left-hand index finger with solid onyx knuckles. "I've got a client who wants some work done on his behalf."

"Doletown work?"

"Partly."

"What kind of client?" Usually it was Lada who had to seek out clients, often while fending off a shoal of competitors. But it sounded as if this one had come to her.

"The client prefers to remain anonymous."

Odd, but okay. It wasn't my business, literally or figuratively. "What kind of work?"

"First we have to bankroll an artist named—" She double-checked her palmreader. "Named Jafar Bloom, without making it too obvious we're interested and without mentioning our client."

Whom I couldn't mention in any case, since Lada wouldn't give me any hints. "What kind of artist is Jafar Bloom?"

"He has an animal act he calls the Chamber of Death, and he wants to open a show under the title 'The Cartesian Theater'. I don't know much more than that. He's deliberately obscure and supposedly difficult to work with. Probably a borderline personality disorder. He's had some encounters with the police but

he's never been charged with aberrancy. Moves around a lot. I don't have a current address—you'll have to track him down."

"And then?"

"Then you front him the money to open his show."

"You want him to sign a contract?"

She gave me a steely look. “No contract. No stipulations."

"Come on, Lada, that doesn't make sense. Anybody could hand this guy cash, if that's all there is to it. Sounds like what your client wants is a cut-out—a blind middleman."

"You keep your accounts, Toby, and I'll keep mine, all right? You didn't fret about ethics when you were fucking that Belgian contortionist."

An argument I preferred not to revisit. “And after that?"

"After what? I explained—"

"You said ‘First we bankroll Jafar Bloom.’ Okay, we bankroll him. Then what?"

"We'll discuss that when the time comes."

Fine. Whatever.

We agreed on a per diem and expenses and Lada gave me some background docs. I read them on the way home, then changed into my gypsy clothes—I had never thrown them away, as much as she had begged me to—and rode a transit elevator all the way down to the bottom stop, sea level, the lowest common denominator: Doletown.

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An aibot constructor roared by Grandfather's window on its way to a nearby hive, momentarily drowning out conversation. I glimpsed the machine as it rumbled past. A mustard-yellow unit, not even remotely anthropomorphic. It wasn't even wearing clothes.

But it was noisy. It carried a quarter-ton sack of concrete on its broad back, and its treads stirred up chalky plumes of dust. It was headed for a nursery hive shaped like a twenty-story artillery shell, where aibots of various phyla were created according to instructions from the Entrepreneurial Expert System that roams the cryptosphere like a benevolent ghost.

Grandfather didn't like the noisy aibots or their factories. “When I was young,” he said as soon as he could make himself heard, “human beings built things for other human beings. And they did it with a decent sense of decorum. *Dulce et decorum.* All this goddamn noise!"

I let the remark pass. It was true, but I didn't want to hear his inevitable follow-up lament: *And in those days a man had to work for his living*, etc. As if we lived in a world where nobody worked! True, since the population crash and the Rationalization, nobody has to work in order to survive ... but most of us do work.

I cleared my throat. “As I was saying—"

"Your story. Right. Jafar Bloom. Did you find him?"

"Eventually."

"He's an artist, you said?"

"Yes."

"So what's his medium?"

"Death," I said.

* * * *

In fact it had been remarkably difficult to hook up with Jafar Bloom.

Doletown, of course, is where people live who (as grandfather would say) "don't work." They subsist instead on the dole, the universal minimum allotment of food, water, shelter, and disposable income guaranteed by law to the entire ever-shrinking population of the country.

Most nations have similar arrangements, though some are still struggling to pay vig on the World Bank loans that bought them their own Entrepreneurial Expert Systems.

Back in grandfather's day economists used to say we couldn't afford a universal dole. What if *everybody* went on it; what if *nobody* worked? Objections that seem infantile now that economics is a real science. If nobody worked, fewer luxury goods would be produced; our EES would sense the shift in demand and adjust factory production downward, hunting a new equilibrium. Some aibots and factories would have to remodel or recycle themselves, or else the universal stipend would be juiced to compensate. Such adjustments, upward or downward, happen every day.

Of course it's a falsehood to say "nobody works," because that's the whole point of an EES/aibot-driven economy. The machines work; human labor is elective. The economy has stopped being a market in the classic sense and become a tool, the ultimate tool—the self-knapping flint, the wheel that makes more wheels and when there are enough wheels reconfigures itself to make some other desirable thing.

So why were people like me (and 75% of the downsized masses) still chasing bigger incomes? Because an economy is an oligarchy, not a democracy; a rich guy can buy more stuff than a dole gypsy.

And why do we want stuff? Human nature, I guess. Grandfather was still nagging me to buy him antiques and beer, even though he was far too dead to appreciate them.

Doletown, as I was saying, is where the hardcore dole gypsies live. I once counted myself among their number. Some are indolent but most are not; they "work" as hard as the rest of us, though they can't exchange their work for money (because they don't have a salable product or don't know how to market themselves or don't care to sully themselves with commerce).

Their work is invisible but potentially exploitable. Lots of cultural ferment happens in Doletown (and every living city has a Doletown by one name or another). Which is why two-bit media brokers like LadajoshiTM trawl the district for nascent trends and unanticipated novelties. Fish in the right Doletown pool and you might land a juicy patent or copyright coshare.

But Jafar Bloom was a hard man to reach, reclusive even by Doletown standards. None of my old cronies knew him. So I put the word out and parked myself in a few likely joints, mostly cafes and talk shops—the Seaside Room, the infamous Happy Haunt, the nameless hostelries along the infill beaches. Even so, days passed before I met anyone who would acknowledge an acquaintance with him.

"Anyone" in this case was a young woman who strode up to my table at the Haunt and said, "People say

you're curious about Jafar Bloom. But you don't look like a creep or a sadist."

"Sit down and have a drink," I said. "Then you can tell me what I am."

She sat. She wore gypsy rags bearing logo stamps from a shop run by aibot recyclers down by the docks. I used to shop there myself. I pretended to admire the tattoo in the shape of the Greek letter omega that covered her cheeks and forehead. It looked as if a dray horse had kicked her in the face. I asked her if she knew Jafar Bloom personally.

"Somewhat," she said. "We're not, um, intimate friends. He doesn't really *have* any intimate friends. He doesn't like people much. How did you hear about him?"

"Word gets around."

"Well, that's how I heard of *you*. What do you want from Bloom?"

"I just want to see the show. That's all. Can you introduce me to him?"

"Maybe."

"Maybe if?"

"Maybe if you buy me something," she said demurely.

So I took her to a mall on one of the abandoned quays where the air smelled of salt and diesel fuel. The mall's location and inventory was dictated by the commercial strategies and profit-optimizing algorithms of the EES, but it stocked some nice carriage-trade items that had never seen the inside of an aibot workshop. She admired (and I bought for her) a soapstone drug pipe inlaid with chips of turquoise—her birthstone, she claimed.

Three days later she took me to a housing bloc built into the interstices of an elevated roadway and left me at an unmarked steel door, on which I knocked three times.

A few minutes later a young man opened it, looking belligerent.

"I don't kill animals for fun," he said, "if that's what you're here for."

Jafar Bloom was tall, lean, pale. His blond hair was long and lank. He wore a pair of yellow culottes, no shirt. "I was told you do theater," I said.

"That's exactly what I do. But rumors get out that I'm torturing animals. So I have the Ethical Police dropping by, or untreated ginks who want to see something get hurt."

"I just want to talk business."

"Business?"

"Strictly."

"I've got nothing to sell."

"May I come in?"

"I guess so," he said, adding a glare that said, *but you're on probation*. "I heard you were looking for me."

I stepped inside. His apartment looked like a studio, or a lab, or a kennel—or a combination of all three. Electronic items were stacked in one dim corner. Cables veined across the floor. Against another wall was a stack of cages containing animals, mostly rats but also a couple of forlorn dogs.

The skylight admitted a narrow wedge of cloudy daylight. The air was hot and still and had a kind of sour jungle odor.

"I'm completely aboveboard here," Bloom said. "I have to be. Do you know what the consequence would be if I was needlessly inflicting pain on living things?"

Same consequence as for any other demonstrable mental aberration. We don't punish cruelty, we treat it. Humanely.

"I'd be psychiatrically modified," Bloom said. "I don't want that. And I don't deserve it. So if you're here to see something *hurt*—"

"I already said I wasn't. But if you don't deal in cruelty—"

"I deal in art," he said crisply.

"The subject of which is—?"

"Death."

"Death, but not cruelty?"

"That's the point. That's *exactly* the point. How do you begin to study or examine something, Mr.—?"

"Paczovski."

"How do you study a thing unless you isolate it from its environment? You want to study methane, you distill it from crude petroleum, right? You want gold, you distill it from dross."

"That's what you do? You distill death?"

"That's exactly what I do."

I walked over to the cages and looked more closely at one of the dogs. It was a breedless mutt, the kind of animal you find nosing through empty houses out in the suburbs. It dozed with its head on its paws. It didn't look like it had been mistreated. It looked, if anything, a little overfed.

It had been fitted with a collar—not an ordinary dog collar but a metallic band bearing bulbous black extrusions and webs of wire that blurred into the animal's coat.

The dog opened one bloodshot eye and looked back at me.

"Good trick, distilling death. How do you do that exactly?"

"I'm not sure I should answer any questions until you tell me what you want to buy."

Bloom stared at me challengingly. I knew he'd been telling the truth about the Ethical Police. Some of their reports had been included in Lada's dossier. None of these animals had been or would be harmed. Not directly.

"I don't want to buy anything," I said.

"You said you this was a business deal."

"Business or charity, depending on how you look at it." I figured I might as well lay it out for him as explicitly as possible. "I don't know what you do, Mr. Bloom. I represent an anonymous investor who's willing to put money into something called The Cartesian Theater. All he wants in return is your written assurance that you'll use the money for this theatrical project rather than, say, buggering off to Djibouti with it. How's that sound?"

It sounded unconvincing even to me. Bloom's skepticism was painfully obvious. "Nobody's giving away free money but the EES."

"Given the investor's wish for anonymity, there's no further explanation I can offer."

"I'm not signing away my intellectual property rights. I've got patents pending. And I refuse to divulge my techniques."

"Nobody's asking you to."

"Can I have *that* in writing?"

"In triplicate, if you want."

Suddenly he wasn't sure of himself. "Bullshit," he said finally. "Nobody invests money without at least a chance of profiting by it."

"Mr. Bloom, I can't answer all your questions. To be honest, you're right. It stand to reason the investor hopes to gain something by your success. But it might not be money. Maybe he's an art lover. Or maybe he's a philanthropist, it makes him feel good to drop large amounts of cash in dark places."

Or maybe he shared Bloom's fascination with death.

"How much money are we talking about?"

I told him.

He tried to be cool about it. But his eyes went a little misty.

"I'll give it some thought," he said.

* * * *

Grandfather had been a trial lawyer during his life. His epibiotic ghost probably didn't remember much of that. Long-term memory was unstable in even the most expensive neuroprostheses. But there was enough of the lawbook left in him that his photo grew more animated when I mentioned open-ended contracts or the Ethical Police.

He said, "Exactly how much did you know about this guy going in?"

"Everything that was publicly available. Bloom was born in Cleveland and raised by his father, an accountant. Showed signs of high intellect at an early age. He studied electronic arts and designed some well-received neural interfaces before he quit the business and disappeared into Doletown. He's eccentric and probably obsessive, but nothing you could force-treat him for."

"And I assume he took the money you offered."

"Correct." Half up front, half when the Cartesian Theater was ready to open.

"So what *was* he doing with those animals?"

One of the sanctuary aibots passed the open door of Grandfather's memorial chamber. It paused a moment, adjusting its tie and tugging at its tailed vest. It swiveled its eyestalks briefly toward us, then wheeled on down the corridor. “Nosey fucking things,” Grandfather said.

"Soon as Bloom signed the contract he invited me to what he called a ‘dress rehearsal.” But it wasn't any kind of formal performance. It was really just an experiment, a kind of dry-run. He sold admission to a few local freaks, people he was ashamed of knowing. People who liked the idea of watching an animal die in agony."

"You said he didn't hurt or kill anything."

"Not as far as the law's concerned, anyway."

* * * *

Bloom explained it all to me as he set up the night's exhibition. He seemed to welcome the opportunity to talk about his work with someone who wasn't, as he said, “quietly deranged.” He hammered that idea pretty hard, as if to establish his own sanity. But how sane is a man whose overweening ambition is to make an artform of death?

He selected one of the dogs and pulled its cage from the rack. The other dogs he released into a makeshift kennel on an adjoining roof. “They get upset if they see what happens, even though they're not in any danger."

Then he put the selected animal into a transparent box the size of a shipping crate. The glass walls of the box were pierced with ventilator holes and inlaid with a mesh of ultrafine inductors. A cable as thick as my arm snaked from the box to the rack of electronic instrumentation. “You recognize the devices on the dog's collar?"

"Neuroprostheses,” I said. “The kind they attach to old people.” The kind they had attached to Grandfather back when he was merely dying, not entirely dead.

"Right,” Bloom said, his face simmering with enthusiasm. “The mind, your mind, any mind—the dog's mind, in this cases—is really a sort of parliament of competing neural subroutines. When people get old, some or all of those functions start to fail. So we build various kinds of prostheses to support aging mentation. Emotive functions, limbic functions, memory, the senses: we can sub for each of those things with an external device."

That was essentially what Grandfather had done for the last five years of his life: shared more and more of his essential self with a small army of artificial devices. And when he eventually died much of him was still running in these clusters of epibiotic prostheses. But eventually, over time, without a physical body to order and replenish them, the machines would drift back to simple default states, and that would be the end of Grandfather as a coherent entity. It was a useful but ultimately imperfect technology.

"Our setup's a little different,” Bloom said. “The prostheses here aren't subbing for lost functions—the dog isn't injured or old. They're just doubling the dog's ordinary brainstates. When I disconnect the prostheses the dog won't even notice; he's fully functional without them. But the ghost in the prostheses—the dog's intellectual double—goes on without him."

"Yeah, for thirty seconds or so,” I said. Such experiments had been attempted before. Imagine being able to run a perfect copy of yourself in a digital environment—to download yourself to an electronic device, like in the movies. Wouldn't that be great? Well, you *can*, sort of, and the process worked the way

Bloom described it. But only briefly. The fully complex digital model succumbs to something called “Shannon entropy” in less than a minute. It's not dynamically stable.

(Postmortem arrays like Grandfather last longer—up to a couple of years—but only because they're radically simplified, more a collection of vocal tics than a real personality.)

"Thirty seconds is enough,” Bloom said.

"For what?"

"You'll see."

About this time the evening's audience began to drift in. Or maybe “audience” is too generous a word. It consisted of five furtive-looking guys in cloaks and rags, each of whom slipped Bloom a few bills and then retreated to the shadows. They spoke not at all, even to each other, and they stared at the dog in its glass chamber with strange, hungry eyes. The dog paced, understandably nervously.

Now Bloom rolled out another, nearly identical chamber. The “death chamber.” It contained not a dog but a sphere of some pink, slightly sparkly substance.

"Electrosensitive facsimile gel,” Bloom whispered. “Do you know what that is?"

I'd heard of it. Facsimile gel is often used for stage and movie effects. If you want an inert duplicate of a valuable object or a bankable star, you scan the item in question and map it onto gel with EM fields. The gel expands and morphs until it's visually identical to the scanned object, right down to color and micron-level detail if you use the expensive stuff. Difference was, the duplicate would be rigid, hollow, and nearly massless—a useful prop, but delicate.

"You duplicate the dog?” I asked.

"I make a *dynamic* duplicate. It changes continuously, in synch with the real thing. I've got a patent application on it. Watch.” He dimmed the lights and threw a few switches on his bank of homemade electronics.

The result was eerie. The lump of gel pulsed a few times, expanded as if it had taken a deep breath, grew legs, and became ... a dog.

Became, in fact, the dog in the adjacent glass cage.

The real dog looked at the fake dog with obvious distress. It whined. The fake dog made the same gesture simultaneously, but no sound came out.

Two tongues lolled. Two tails drooped.

Now the freaks in the audience were almost slavering with anticipation.

I whispered, “And this proves what?"

Bloom raised his voice so the ginks could hear—a couple of them were new and needed the explanation. “Two dogs,” he said. “One real. One artificial. The living dog is fitted with an array of neuroprostheses that duplicate its brain states. The dog's brain states are modeled in the electronics, here. Got that?"

We all got it. The audience nodded in unison.

"The dog's essence, its sense of self, is distributed between its organic brain and the remote prostheses.

At the moment it's controlling the gel duplicate, too. When the real dog lifts his head and sniffs the air—like that: see?—he lifts the fake dog's head simultaneously. The illusion mimics the reality. The twinned soul operates twin bodies, through the medium of the machine."

His hand approached another switch.

"But when I throw *this* switch, the living dog's link to the prosthetics is severed. The original dog becomes merely itself—it won't even notice that the connection has been cut."

He threw the switch; the audience gasped—but again, nothing obvious happened.

Both dogs continued to pace, as if disturbed by the sharp smell of sweat and ionization.

"As of now," Bloom said, "the artificial animal is dynamically controlled *solely by the neuroprostheses*. It's an illusion operated by a machine. But it moves as if it had mass, it sees as if it had eyes, it retains a capacity for pleasure or pain."

Now the behavior of the two dogs began to fall out of synchronization, subtly at first, and then more radically. Neither dog seemed to like what was happening. They eyed each other through their respective glass walls and backed away, snarling.

"Of course," Bloom added, his voice thick with an excitement he couldn't disguise, "without a biological model the neuroprostheses lose coherence. Shannon entropy sets in. Ten seconds have passed since I threw the final switch." He checked his watch. "Twenty."

The fake dog shook its head and emitted a silent whine.

It moved in a circle, panting.

It tried to scratch itself. But its legs tangled and bent spasmodically. It teetered a moment, then fell on its side. Its ribs pumped as if it were really breathing, and I guess it thought it *was* breathing—gasping for air it didn't really need and couldn't use.

It raised its muzzle and bared its teeth.

Its eyes rolled aimlessly. Then they turned opaque and dissolved into raw gel.

The artificial dog made more voiceless screaming gestures. Other parts of it began to fall off and dissolve. It arched its back. Its flanks cracked open, and for a moment I could see the shadowy hollowness inside.

The agony went on for what seemed like centuries but was probably not more than a minute or two. I had to turn away.

The audience liked it, though. This was what they had come for, this simulation of death.

They held their breath until the decoherent mass of gel had stopped moving altogether; then they sighed; they applauded timidly. It was only when the lights came up that they began to look ashamed. "Now get out," Bloom told them, and when they had finished shuffling out the door, heads down, avoiding eye contact, he whispered to me, "I hate those guys. They are truly fucking demented."

I looked back at the two glass cages.

The original dog was trembling but unhurt. The duplicate was a quiescent puddle of goo. It had left a sharp tang in the air, and I imagined it was the smell of pain. The thing had clearly been in pain. "You said there was no cruelty involved."

"No cruelty *to animals*," Bloom corrected me.

"So what do you call this?"

"There's only one animal in the room, Mr. Paczovski, and it's completely safe, as you can see. What took shape in the gel box was an animation controlled by a machine. It didn't die because it was never alive."

"But it was in agony."

"By definition, no, it wasn't. A machine can only *simulate* pain. Look it up in the statutes. Machines have no legal standing in this regard."

"Yeah, but a complex-enough machine—"

"The law doesn't make that distinction. The EES is complex. Aibots are complex: they're all linked together in one big neural net. Does that make them people? Does that make it an act of sadism if you kick a vacuum cleaner or default on a loan?"

Guess not. Anyway, it was his show, not mine. I meant to ask him if the dog act was the entire substance of his proposed Cartesian Theater ... and why he thought anyone would want to see such a thing, apart from a few unmedicated sadists.

But this wasn't about dogs, not really. It was a test run. When Bloom turned away from me I could see a telltale cluster of bulges between his shoulder blades. He was wearing a full array of neuroprostheses. That's what he meant when he said the dogs were experiments. He was using them to refine his technique. Ultimately, he meant to do this *to himself*.

* * * *

"Technically," Grandfather said, "he's right. About the law, I mean. What he's doing, it's ingenious and it's perfectly legal."

"Lada's lawyers told her the same thing."

"A machine, or a distributed network of machines, can be intelligent. But it can never be a person under the law. It can't even be a legal dog. Bloom wasn't shitting you. If he'd hurt the animal in any way he would have been remanded for treatment. But the fake dog, legally, is only a *representation* of an animal, like an elaborate photograph."

"Like you," I pointed out.

He ignored this. "Tell me, did any of the ginks attending this show look rich?"

"Hardly."

"So the anonymous investor isn't one of them."

"Unless he was in disguise, no. And I doubt Bloom would have turned down a cash gift even if it came from his creepy audience—the investor wouldn't have needed me or Lada if he had a direct line to Bloom."

"So how did your investor hear about Bloom in the first place, if he isn't friendly with him or part of his audience?"

Good question.

I didn't have an answer.

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When I told Lada what I'd seen she frowned and ran her gold finger over her rose-pink lower lip, a signal of deep interest, the kind of gesture professional gamblers call a “tell."

I said, “I did what you asked me to. Is there a problem with that?"

"No—no problem at all. You did fine, Toby. I just wonder if we should have taken a piece for ourselves. A side agreement of some kind, in case this really does pan out."

"If *what* pans out? When you come down to it, all Bloom has to peddle is an elaborate special effect. A stage trick, and not a very appealing one. The ancillary technology might be interesting, but he says he already filed patents."

"The investor obviously feels differently. And he probably didn't get rich by backing losers."

"How well do you know this investor?"

She smiled. “All honesty? I've never met him. He's a text-mail address."

"You're sure about his gender, at least?"

"No, but, you know, *death*, *pain*—it all seems a little masculine, doesn't it?"

"So is there a next step or do we just wait for Bloom to put together his show?"

"Oh,” and here she grinned in a way I didn't like, “there's *definitely* a next step."

She gave me another name. Philo Novembre.

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"Rings a bell,” Grandfather said. “Faintly. But then, I've forgotten so much."

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Philo Novembre was easier to find than Jafar Bloom. At least, his address was easier to find—holding a conversation with him was another matter.

Philo Novembre was ten years short of a century old. He lived in an offshore retirement eden called Wintergarden Estates, connected to the mainland by a scenic causeway. I was the most conspicuously youthful visitor in the commute bus from the docks, not that the sample was representative: there were only three other passengers aboard. Aibot transports hogged the rest of the road, shuttling supplies to the Wintergarden. Their big eyes tracked the bus absently and they looked bored, even for machines.

Novembre, of course, had not invited me to visit, so the aibot staffing the reception desk asked me to wait in the garden while it paged him—warning me that Mr. Novembre didn't always answer his pages promptly. So I found a bench in the atrium and settled down.

The Wintergarden was named for its atrium. I don't know anything about flowers, but there was a gaudy assortment of them here, crowding their beds and creeping over walkways and climbing the latticed walls, pushing out crayon-colored blooms. Old people are supposed to like this kind of thing. Maybe they do, maybe they don't; Grandfather had never demonstrated an interest in botany, and he had died at the age of a century and change. But the garden was pretty to look at and it flushed the air with complex fragrances, like a dream of an opium den. I was nearly dozing when Philo Novembre finally showed up.

He crossed the atrium like a force of nature. Elderly strollers made way for his passage; garden-tending aibots the size of cats dodged his footfalls with quick, knowing lunges. His face was lined but sharp, not sagging, and his eyes were the color of water under ice. His left arm was unapologetically prosthetic, clad in powder-black brushed titanium. His guide, a thigh-high aibot in brown slacks and a golf shirt, pointed at me and then scuttled away.

I stood up to meet him. He was a centimeter or two taller than me. His huge gray gull-winged eyebrows contracted. He said, “I don't know you."

"No sir, you don't. My name is Toby Paczovski, and I'd be honored if you'd let me buy you lunch."

It took some haggling, but eventually he let me lead him to one of the five restaurants in the Wintergarden complex. He ordered a robust meal, I ordered coffee, and both of us ignored the elderly customers at the adjoining tables, some so extensively doctored that their physical and mental prostheses had become their defining characteristics. One old gink sucked creamed corn through a tube that issued from his jaw like an insect tongue, while his partner glared at me through lidless ebony-black eyes. I don't plan ever to get old. It's unseemly.

"The reason I'm here,” I began, but Novembre interrupted:

"No need to prolong this. You bought me a decent meal, Mr. Paczovski. I owe you a little candor, if nothing else. So let me explain something. Three or four times a year somebody like yourself shows up here at the Wintergarden and flatters me and asks me to submit to an interview or a public appearance. This person might represent a more or less respectable agency or he might be a stringer or a media pimp, but it always comes down to the same pitch: once-famous enemy of automated commerce survives into the golden age of the EES. What they want from me is either a gesture of defiance or a mumbled admission of defeat. They say they'll pay generously for the right note of bathos. But the real irony is that these people have come on a quest as quixotic as anything I ever undertook. Because I don't make public appearances. Period. I don't sign contracts. Period. I'm retired. In every sense of the word. Now: do you want to spend your time more profitably elsewhere, or shall we order another round of coffee and discuss other things?"

"Uh,” I said.

"And of course, in case you're already recording, I explicitly claim all rights to any words I've spoken or will speak at this meeting or henceforth, subject to the Peking Accords and the Fifty-second Amendment."

He grinned. His teeth looked convincingly real. But most people's teeth look real these days, except the true ancients, like the guy at the next table.

* * * *

"Well, he knows his intellectual property law,” Grandfather said. “He's got you dead to rights on that one."

"Probably so,” I said, “but it doesn't matter. I wasn't there to buy his signature on a contract."

"So what *did* you want from him? Or should I say, what did Lada want from him?"

"She wanted me to tell him about Jafar Bloom. Basically, she wanted me to invite him to opening night at the Cartesian Theater."

"That's it?"

"That's it."

"So this client of hers was setting up a scenario in which Novembre was present for Bloom's death act."

"Basically, yeah."

"For no stated reason." Grandfather's photograph was motionless a few moments. Implying deep thought, or a voltage sag.

I said, "Do you remember Philo Novembre back when he was famous? The eighties, that would have been."

"The 2080's," Grandfather mused. "I don't know. I remember that I once remembered those years. I have a memory of having a memory. My memories are like bubbles, Toby. There's nothing substantial inside, and when I touch them they tend to disappear."

* * * *

Philo Novembre had been a celebrity intellectual back in the 2080's, a philosopher, a sort of 21st century Socrates or Aristotle.

In those days—the global population having recently restabilized at two billion after the radical decline of the Plague Years—everyday conveniences were still a dream of the emerging Rationalization. Automated expert systems, neuroprostheses, resource-allocation protocols, the dole: all these things were new and contentious, and Philo Novembre was suspicious of all of them.

He had belonged to no party and supported no movement, although many claimed him. He had written a book, *The Twilight of the Human Soul*, and he had stomped for it like a backwoods evangelist, but what had made him a media celebrity was his personal style: modest at first; then fierce, scolding, bitter, moralistic.

He had claimed that ancient virtues were being lost or forgotten in the rush to a rationalized economy, that expert systems and globally-distributed AI, no matter how sophisticated, could never emulate true moral sensitivity—a human sense of right and wrong.

That was the big debate of the day, simplistic as it sounds, and it ultimately ended in a sort of draw. Aibots and expert systems were granted legal status *in loco humanis* for economic purposes but were denied any broader rights, duties, privileges, or protection under the law. Machines aren't people, the courts said, and if the machines said anything in response they said it only to each other.

And we all prospered in the aftermath, as the old clunky oscillating global marketplace grew increasingly supple, responsive, and bias-free. Novembre had eventually disappeared from public life as people lost interest in his jeremiads and embraced the rising prosperity.

Lada had given me a dossier of press clippings on Novembre's decline from fame. Around about the turn of the century he was discovered in a Dade County doletown, chronically drunk. A few months later he stumbled into the path of a streetcleaning aibot, and his left arm was crushed before the startled and penitent machine could reverse its momentum. A local hospital had replaced his arm—it was still the only prosthesis he was willing to wear—and incidentally cured his alcoholism, fitting him with a minor corticolimbic mod that damped his craving. He subsequently attempted to sue the hospital for neurological intervention without written consent but his case was so flimsy it was thrown out of court.

After which Novembre vanished into utter obscurity and eventually signed over his dole annuities to the Wintergarden Retirement Commune.

From which he would not budge, even for a blind date with Jafar Bloom. I told Lada so when I made it back to the mainland.

"We have not yet begun to fight," Lada said.

"Meaning—?"

"Meaning let me work it for a little while. Stay cozy with Jafar Bloom, make sure he's doing what we need him to do. Call me in a week. I'll come up with something."

She was thinking hard ... which, with Lada, was generally a sign of trouble brewing.

* * * *

Unfortunately, I had begun to despise Jafar Bloom.

As much as Bloom affected to disdain the ginks and gaffers who paid to see his animal tests, he was just as twisted as his audience—more so, in his own way. Morbid narcissism wafted off him like a bad smell.

But Lada had asked me to make sure Bloom followed through on his promise. So I dutifully spent time with him during the month it took to rig his show. We rented an abandoned theater in the old district of Doletown and I helped him fix it up, bossing a fleet of renovation aibots who painted the mildewed walls, replaced fractured seats, restored the stage, and patched the flaking proscenium. We ordered industrial quantities of reprogels and commissioned a control rig of Bloom's design from an electronics prototyper.

During one of these sessions I asked him why he called his show "The Cartesian Theater."

He smiled a little coyly. "You know the name Descartes?"

No. I used to know a Belgian acrobat called Giselle de Canton, but the less said about that the better.

"The philosopher Descartes," Bloom said patiently. "Rene Descartes, 1596-1650. *Discourse on Method. Rules for the Direction of the Mind*."

"Sorry, no," I said.

"Well. In one of his books Descartes imagines the self—the human sense of identity, that is—as a kind of internal gnome, a little creature hooked up to the outside world through the senses, like a gink in a one-room apartment staring out the window and sniffing the air."

"So you believe that?"

"I believe in it as a metaphor. What I mean to do on stage is externalize my Cartesian self, or at least a copy of it. Let the gnome out for a few seconds. Modern science, of course, says there is no unitary self, that what we call a 'self' is only the collective voice of dozens of neural subsystems working competitively and collaboratively—"

"What else could it be?"

"According to the ancients, it could be a human soul."

"But your version of it dies in agony in less than a minute."

"Right. If you believed in the existence of the soul, you could construe what I do as an act of murder. Except, of course, the soul in question is dwelling in a machine at the moment of its death. And we have ruled, in all our wisdom, that machines don't *have* souls."

"Nobody believes in souls," I said.

But I guess there were a few exceptions.

Philo Novembre, for one.

* * * *

Lada called me into her office the following week and handed me another dossier of historical files. "More background?"

"Leverage," she said. "Information Mr. Novembre would prefer to keep quiet."

"You're asking me to blackmail him?"

"God, Toby. Settle down. The word 'blackmail' has really awkward legal connotations. So let's not use it, shall we?"

"If I threaten him he's liable to get violent." Novembre was old, but that titanium forearm had looked intimidating.

"I don't pay you to do the easy things."

"I'm not sure you pay me enough to do the hard things. So where'd this information come from? Looks like ancient police files."

"Our client submitted it," Lada said.

* * * *

"What did you ever see in this woman?" Grandfather asked.

Good question, although he had asked it a dozen times before, in fact whenever I visited him. I didn't bother answering anymore.

I had come to the city a dozen years ago from a ghost town in the hinterland—one of those wheat towns decimated by the population implosion and rendered obsolete by aifarming—after my parents were killed when a malfunctioning grain transport dropped out of the sky onto our old house on Nightshade Street. Grandfather had been my only living relative and he had helped me find Doletown digs and cooked me an old-fashioned meal every Sunday.

City life had been a welcome distraction and the dole had seemed generous, at least until grief faded and ambition set in. Then I had gone looking for work, and Lada Joshi had been kind enough, as I saw it then, to hire me as one of her barely-paid Doletown scouts.

Which was fine, until the connection between us got more personal. Lada saw me as a diamond-in-the-rough, begging for her lapidary attention. While I saw her as an ultimately inscrutable amalgam of love, sex, and money.

It worked out about as well as you'd expect.

* * * *

Novembre's official biography, widely-distributed back when he was famous, made him out to be the dutiful son of a Presbyterian pastor and a classical flautist, both parents lost in the last plagues of the Implosion. The truth, according to Lada's files, was a little uglier. Philo Novembre's real name was Cassius Flynn, and he had been raised by a couple of marginally-sane marijuana farmers in rural

Minnesota. The elder Flynns had been repeatedly arrested on drug and domestic violence charges, back in the days before the Rationalization and the Ethical Police. Their death had in a sense been a boon for young Cassius, who had flourished in one of the big residential schools run by the federal government for orphans of the Plague Years.

Nothing too outrageous, but it would have been prime blackmail material back in the day. But Novembre wasn't especially impressed when I showed him what we had.

"I made my name," he said, "by proclaiming a belief in the existence of metaphysical good and evil independent of social norms. I allowed a publicist to talk me into a lie about my childhood, mainly because I didn't want to be presented to the world as a psychological case study. Yes, my parents were cruel, petty, and venal human beings. Yes, that probably did contribute to the trajectory of my life and work. And yes, it still embarrasses me. But I'm far too old and obscure to be blackmailed. Isn't that obvious? Go tell the world, Mr. Paczovski. See if the world cares."

"Yeah," I said, "it did seem like kind of a long shot."

"What intrigues me is that you would go to these lengths to convince me to attend a one-shot theatrical production, for purposes you can't explain. Who hired you, Mr. Paczovski?"

He didn't mean Lada. She was only an intermediary. "Truly, I don't know."

"That sounds like an honest answer. But it begs another question. Who, frankly, imagines my presence at Mr. Bloom's performance would be in any way meaningful?" He lowered his head a moment, pondering. Then he raised it. "Do you know how my work is described in the *Encyclopedia of Twenty-First Century American Thought*? As—and I'm quoting—'a humanistic questioning of economic automation, embodied in a quest to prove the existence of transcendent good and evil, apart from the acts encouraged or proscribed by law under the Rationalization.'"

"Transcendent," I said. "That's an interesting word." I wondered what it meant.

"Because it sounds like your Mr. Bloom has discovered just that—a profoundly evil act, for which he can't be prosecuted under existing law."

"Does that mean you're interested?"

"It means I'm curious. Not quite the same thing."

But he was hooked. I could hear it in his voice. The blackmail had had its intended effect, though not in the customary way.

* * * *

"Entertainment," Grandfather said.

"What?"

"That's really the only human business anymore. Aibots do all the physical labor and the EES sorts out supply and demand. What do *we* do that *bots* can't do? Entertain each other, mostly. Lie, gossip, and dance. That, or practice law."

"Yeah, but so?"

"It's why someone wanted to put Bloom and Novembre together. For the entertainment value." His photographed stared while I blinked. "The *motive*, stupid," he said.

"Motive implies a crime."

"You mentioned blood. So I assume Novembre made the show."

"It opened last night." And closed.

"You want to tell me about it?"

Suddenly, no, I didn't. I didn't even want to think about it.

But I was in too deep to stop. Story of my life.

* * * *

Doletown, of course, is a museum of lost causes and curious passions, which means there's plenty of live theater in Doletown, most of it eccentric or execrably bad. But Bloom's production didn't rise even to that level. It lacked plot, stagecraft, publicity, or much of an audience, and none of that mattered to Jafar Bloom: as with his animal experiments, public display was only a way of raising money, never an end in itself. He didn't care who watched, or if anyone watched.

The Cartesian Theater opened on a windy, hot night in August. The moon was full and the streets were full of bored and restless dole gypsies, but none of them wanted to come inside. I showed up early, not that I was looking forward to the show.

Bloom rolled his glassy Death Chamber onto the stage without even glancing at the seats, most of which were empty, the rest occupied by the same morbid gaffers who had attended his animal experiments. There were, in fact, more aibots than live flesh in the house. The ushers alone—wheeled units in cheap black tuxedos—outnumbered the paying customers.

Philo Novembre, dressed in gray, came late. He took an empty seat beside me, front-row-center.

"Here I am," he whispered. "Now, who have I satisfied? Who wants me here?"

He looked around but sighted no obvious culprit. Nor did I, although it could have been someone in dole drag: the wealthy have been known to dress down and go slumming. Still, none of these ten or twelve furtive patrons of the arts looked plausibly like a high-stakes benefactor.

The theater smelled of mildew and mothballs, despite everything we'd done to disinfect it.

"What it is," Novembre mooted to me as he watched Bloom plug in a set of cables, "is a sort of philosophical grudge match, yes? Do you see that, Mr. Paczovski? Me, the archaic humanist who believes in the soul but can't establish the existence of it, and Mr. Bloom," here he gestured contemptuously at the stage, "who generates evil as casually as an animal marking its territory with urine. A modern man, in other words."

"Yeah, I guess so," I said. In truth, all this metaphysical stuff was beyond me.

Eventually the lights dimmed, and Novembre slouched into his seat and crossed his good arm over his prosthesis.

And the show began.

Began prosaically. Bloom strolled to the front of the stage and explained what was about to happen. The walls of the Death Chamber, he said, were made of mirrored glass. The audience would be able to see inside but the occupant—or occupants—couldn't see out. The interior of the chamber was divided into

two identical cubicles, each roughly six feet on a side. Each cubicle contained a chair, a small wooden table, a fluted glass, and a bottle of champagne.

Bloom would occupy one chamber. Once he was inside, his body would be scanned and a duplicate of it would take shape in the other. Both Bloom and counter-Bloom would look and act identically. Just like the dogs in his earlier experiment.

Novembre leaned toward my right ear. "*I see now what he intends*," the old man whispered. "*The genius of it*—"

There was scattered applause as Bloom opened the chamber door and stepped inside.

"The perverse genius," Novembre whispered, "is that Bloom himself won't know—"

And in response to his presence hidden nozzles filled the duplicate chamber with pink electrosensitive gel, which contracted under the pressure of invisible sculpting fields into a crude replica of Bloom, a man-shaped form lacking only the finer detail.

"He won't know which is which, or rather—"

Another bank of electronics flickered to life, stage rear. The gel duplicate clarified in an instant, and although I knew what it was—a hollow shell of adaptive molecules—it looked as substantial, as weighty, as Bloom himself.

Bloom's neural impulses were controlling both bodies now. He lifted the champagne bottle and filled the waiting glass. His dutiful reflection did likewise, at the same time and with same tight, demented smile. He toasted the audience he couldn't see.

"Or rather, he won't know which is himself—each entity will believe, feel, intuit that it's the true and only Bloom, until one—"

Now Bloom replaced the glass on the table top, cueing an aibot stagehand in the wings. The house lights flickered off and after a moment were replaced by a pair of baby spots, one for each division of the Death Chamber.

This was the signal that Bloom had cut the link between himself and the machinery. The neuroprostheses were running on a kind of cybernetic inertia. The duplicate Bloom was on borrowed time, but didn't know it.

The two Blooms continued to stare at one another. Narcissus in Hades.

And Novembre was right, of course: the copy couldn't tell itself from the real thing, the real thing from the copy.

"Until one begins to decohere," Novembre finished. "Until the agony begins."

Thirty seconds.

I resisted the urge to look at my watch.

The old philosopher leaned forward in his seat.

Bloom and anti-Bloom raised glasses to each other. Both appeared to drink. Both had Bloom's memory. Both had Bloom's motivation. Each believed himself to be the authentic Bloom.

And both must have harbored doubts. Both thinking: I know I'm the real item, I can't be anything else, but what if—*what if*—?

A trickle of sweat ran down the temples of both Blooms.

Both Blooms crossed their legs and both attempted another nonchalant sip of champagne.

But now they had begun to fall just slightly out of synchronization.

The Bloom on the right seemed to gag at the liquid.

The Bloom on the left saw the miscue and liked what he saw.

The Bloom on the right fumbled the champagne glass and dropped it. The glass shattered on the chamber floor.

The opposite Bloom widened his eyes and threw his own glass down. The right-hand Bloom stared in disbelief.

That was the worst thing: that look of dawning understanding, incipient terror.

The audience—including Novembre—leaned toward the action. “God help us,” the old philosopher said.

Now Bloom's electronic neuroprostheses, divorced from their biological source, began to lose coherence more rapidly. Feedback loops in the hardware read the dissolution as physical pain. The false Bloom opened his mouth—attempting a scream, though he had no lungs to force out air. Wisps of gel rose from his skin: he looked like he was dissolving into meat-colored smoke. His eyes turned black and slid down his cheeks. His remaining features twisted into a grimace of agony.

The real Bloom grinned in triumph. He looked like a man who had won a desperate gamble, which in a sense he had. He had wagered against his own death and survived his own suicide.

I didn't want to watch but this time I couldn't turn away—it absorbed my attention so completely that I didn't realize Philo Novembre had left his seat until I saw him lunge across the stage.

I was instantly afraid for Bloom, the real Bloom. The philosopher was swinging his titanium arm like a club and his face was a mask of rage. But he aimed his first blow not at Bloom but at the subchamber where the his double was noisily dying. I think he meant to end its suffering.

A single swing of his arm cracked the wall, rupturing the embedded sensors and controllers.

Aibot ushers and stagehands suddenly hustled toward the Death Chamber as if straining for a view. The dying duplicate of Bloom turned what remained of his head toward the audience, as if he had heard a distant sound. Then he collapsed with absolute finality into a puddle of amorphous foam.

Bloom forced open his own chamber door and ran for the wings. Novembre spotted him and gave chase. I tried to follow, but the crowd of aibots closed ranks and barred my way.

Lada would love this, I thought. Lada would make serious money if she could retail a recording of this event. But I wasn't logging it and nobody else seemed to be, except of course the aibots, who remember everything; but their memories are legally protected, shared only by other machines.

This was unrecorded history, unhappening even as it happened.

* * * *

I caught up with Bloom in the alley behind the Cartesian Theater. Too late. Novembre had caught up with him first. Bloom was on the ground, his skull opened like a ripe melon. A little gray aibot with EMS protocols sat astride Bloom's chest, stimulating his heart and blowing air into his lungs—uselessly. Bloom was dead, irretrievably dead long before the ambulance arrived and gathered him into its motherly arms.

As for Novembre—

It looked at first as if he he'd escaped into the crowd. But I went back into the theater on a hunch, and I found him there, hidden in the fractured ruin of Jafar Bloom's Death Chamber, where he had opened his own throat with a sliver of broken glass and somehow found time to write the words BUT IT EXISTS in blood on the chamber wall.

* * * *

"Yup, it was a show," Grandfather said.

I gave his image an exasperated look. "Of course it was a show. 'The Cartesian Theater'—what else could it be?"

"Not that. I mean the mutual self-destruction of Bloom and Novembre. You see it, Toby? The deliberate irony? Novembre believes in humanity and hates intellectual machines. But he takes pity on the fake Bloom as it dies, and by doing so he tacitly admits that a machine can harbor something akin to a human soul. He found what he had been looking for all his life, a metaphysical expression of human suffering outside the laws of the Rationalization—but he found it in a rack of electronics. We have to assume that's what your client wanted and expected to happen. A philosophical tragedy, culminating in a murder-suicide."

This was Grandfather's trial-lawyer subroutine talking, but what he said made a certain amount of sense. It was as if I had played a supporting role in a drama crafted by an omniscient playwright. Except—

"Except," I said, "who saw it?"

"One of the attendees might have recorded it surreptitiously."

"No one witnessed both deaths, according to the police, and they searched the witnesses for wires."

"But the transaction was completed? Lada was paid for her services?"

I had talked to her this morning. Yes, she was paid. Generously and in full. The client had evidently received value for money.

"So you have to ask yourself," Grandfather said, "(and I no longer possess the imagination to suggest an answer), who could have known about both Bloom and Novembre? Who could have conceived this scenario? Who understood the motivation of both men intimately enough to predict a bloody outcome? To whose taste does this tragedy cater, and how was that taste satisfied if the client was not physically present?"

"Fuck, I don't know."

Grandfather nodded. He understood ignorance. His own curiosity had flickered briefly but it died like a spent match. "You came here with a problem to solve..."

"Right," I said. "Here's the thing. Lada's happy with how this whole scenario worked. She said I outdid myself. She says the client wants to work with her again, maybe on a regular basis. She offered to hire me back full-time and even increase my salary."

"Which is what you'd been hoping for, yes?"

"But suddenly the whole idea makes me a little queasy—I don't know why. So what do you think? Should I re-up, take the money, make a success of myself? Maybe hook up with Lada again, on a personal level I mean, if things go well? Because I could do that. It would be easy. But I keep thinking it'd be even easier to find a place by the docks and live on dole and watch the waves roll in."

Watch the aibots build more hives and nurseries. Watch the population decline.

"I'm far too dead," Grandfather said, "to offer sensible advice. Anyway, it sounds as if you've already decided."

And I realized he was right—I had.

* * * *

On the way out of the sanctuary where Grandfather was stored I passed a gaggle of utility aibots. They were lined up along the corridor in serried ranks, motionless, and their eyes scanned me as I passed.

And as I approached the exit, the chief custodial aibot—a tall, lanky unit in a black vest and felt hat—stepped into my path. He turned his face down to me and said, "Do you know Sophocles, Mr. Paczovski?"

I was almost too surprised to answer. "Sophocles who?"

"Ajax," he said cryptically. "The Chorus. When Reason's day / Sets rayless—joyless—quenched in cold decay / Better to die, and sleep / The never-waking sleep, than linger on, / And dare to live, when the soul's life is gone."

And while I stared, the gathered aibots—the ones with hands, at least—began gently to applaud.