Pu-239

an adaptation of the short story by Ken Kalfus

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Characters

- TIMOFEY A nuclear technician. 50 years old.
- SHIV A young man with dark, bony features. A hoodlum.
- CHORUS 1 Male. Dressed in blue. Also YEGOR.
- CHORUS 2 Female. Dressed in blue. Also SCIENTIST/MARINA/ANDREI.

The accident at the plant

- CHORUS 1: Timofey had worked in 16 nearly his entire adult life
- CHORUS 2: entrusted with the bounteous
- CHORUS 1: transfiguring
- CHORUS 2: secrets of the atom.
- CHORUS 1: He knew what the fundamental physics allowed.
- CHORUS 2: [as a visiting scientist] Idiot! I'm Nuclear Section Secretary of the Academy of Sciences. I fucking *own* the established principles of nuclear physics. You're a *technician*.
- TIMOFEY: Greater quantities of the isotope will not be produced by the method you have described, Comrade.
- C.2/SCIENTIST: The isotope will be produced, in the quantities and timeframe I have said, by the means I have shown. This isotope is necessary for my research.

TIMOFEY: It. Um.

C.2/SCIENTIST: What? What!

TIMOFEY: I don't think—Comrade—

- C.2/SCIENTIST: Are there any other questions, any educated questions?
 - CHORUS 1: The defense ministry rejected the proposal for reasons of economy. Neither Timofey or the visiting scientist were ever shown correct.
 - CHORUS 2: [As chorus, drawing closer to TIMOFEY.] Neutron diffraction and particle physics were Timofey's constant companions.
 - CHORUS 1: [Drawing closer.] Who knew better than he the maze of patches and repairs threaded through the plant?
 - CHORUS 2: The blueprints were useless by now. That was sure.
 - CHORUS 1: And so, better than any other he knew that the accident was impossible—on paper.
 - TIMOFEY: A simple error. A valve was left open. A pipe ruptured.

- CHORUS 2: A technician trapped in a crawlspace.
- CHORUS 1: He stared at the corroding surface of the tin duct a few centimeters from his face.
- TIMOFEY: I tried to imagine I was inhaling dollar bills. That once they lodged in my lungs and bone marrow they would bombard my body with high energy dimes, nickels, and quarters.
- CHORUS 1: The alarm was discounted at first.
- CHORUS 2: False alarms rang and flashed through the plant like birds in a rain forest.
- CHORUS 1: The rescue crew eventually found a soft drink dispenser blocking the room in which the radiation suits were kept.
- CHORUS 2: Once in the room, they learned several of the oxygen tanks had been left discharged.
- CHORUS 1: Once they reached Timofey, he had been inhaling smoke laced with elements from the actinide series for an hour and forty minutes.

[A blue flash.]

The bar of a hotel in Moscow

SHIV: First time in Moscow, my friend?

[TIMOFEY slowly raises his head and studies the young man standing before him. SHIV pulls a chair underneath himself and sits down heavily.]

[In a low voice.] It's lonely here. Would you like to meet someone?

[TIMOFEY doesn't reply or make any sign that he's even heard SHIV.]

You've come to the right place. I'd be pleased to make an introduction.

[TIMOFEY continues to stare at SHIV.]

TIMOFEY: [Abruptly, in unaccented educated Russian.] I have something to sell.

- SHIV: [grinning] You're a businessman. Well, you've come to the right place for that, too. I'm also a businessman. What is it you want to sell?
- TIMOFEY: I can't discuss it here.

SHIV: All right.

[SHIV stands up.]

- CHORUS 1: Shiv led Timofey to a little alcove filled with video poker machines.
- CHORUS 2: Incandescent images of kings, queens, and knaves flashed across the young man's face.
- TIMOFEY: No, this isn't private enough.

SHIV: Sure it is. More business is done here than on the Moscow Stock Exchange.

TIMOFEY: No.

[SHIV shrugs and heads back to the table. TIMOFEY whispers behind SHIV:] You're making the biggest mistake of your life. I'll make you rich.

[SHIV turns back towards TIMOFEY.]

- CHORUS 1: Shiv motioned toward a row of elevators bedecked with posters for travel agencies and masseuses.
- CHORUS 2: Timofey remained in the video poker alcove for a long moment, trying to decide whether to follow.
- CHORUS 1: The doors closed right behind him when he finally stepped into the elevator.

SHIV: If you're jerking me around...

[They ride up in silence. SHIV bribes the dezhurnaya with a fiver to give him a room key.]

CHORUS 1: The fourth-floor *dezhurnaya* decided to be difficult.

[SHIV gives her another five.]

CHORUS 2: She returned the fiver Shiv slipped her because it had a crease down the middle.

[The dezhurnaya gives over the key. SHIV and TIMOFEY enter the room. SHIV pulls out a pack of Marlboros and a gold-plated lighter.]

SHIV: All right. This better be worth my while.

[TIMOFEY reaches into his jacket—too abruptly: SHIV tenses and reaches for the dirk in his back pocket. TIMOFEY pulls out a green cardboard folder.]

TIMOFEY: Look at this.

[SHIV returns the blade.]

SHIV: Why?

TIMOFEY: Just look at it.

[SHIV opens the folder. Inside are TIMOFEY's internal passport, and some other documents.]

SHIV: Timofey Fyodorovich, pleased to meet you. So what?

TIMOFEY: Look at where I live: Skotoprigonyevsk-16.

[SHIV shows no sign of being impressed, but TIMOFEY obviously expects him to be.]

Now look at the other papers. See, this is my pass to the Strategic Production Facility.

- SHIV: Comrade, if you think I'm buying some fancy documents-
- TIMOFEY: Listen to me. My unit's principal task is the supply of the strategic weapons force. Our reactor produces Pu-239 as a fission by-product for manufacture into warheads. These operations have been curtailed, but the reactors must be kept functioning. Decommissioning them would be even more costly than maintaining them—and we can't even do that properly. *[an angry whisper]* There have been many lapses in the administration of safety procedure.

[TIMOFEY looks intently at SHIV, too see if he understands. But SHIV isn't listening.]

- CHORUS 1: His colleagues thought of Marina and the boy as Timofey was pulled from the crawlspace.
- CHORUS 2: He saw the lab as for the first time as he was extracted, surrounded by phantoms in radiation suits.
- CHORUS 1: The cracked walls.
- CHORUS 2: The electrical cords snaking underfoot.
- CHORUS 1: Scratched and fogged glass over the gauges.
- CHORUS 2: Mold-splattered valves and pipes.

- CHORUS 1: The frayed tubing that bypassed sections of missing pipe,
- CHORUS 2: kept in place with electrical tape.
- TIMOFEY: There was an accident. I was contaminated. I have a wife and child, and nothing to leave them. That is why I'm here.
 - SHIV: [Violently.] Don't tell me about your wife and child. You can fuck them both to hell. I'm a businessman.

TIMOFEY: [*Taken aback.*] All right then. Here's what you need to know. I have diverted a small quantity of fissile material. I'm here to sell it. [SHIV wipes his nose.]

- CHORUS 1: Shiv has a cold.
- CHORUS 2: Timofey wonders if it would be Shiv's germs that kill him,
- CHORUS 1: invading his radiation-damaged immune system.
- TIMOFEY: Well, are you interested?

[SHIV tugs a mouthful of smoke from his cigarette.]

- SHIV: In what?
- TIMOFEY: Are you listening to anything I'm saying? I have a little more than three hundred grams of weapons-grade plutonium. It can be used to make an atomic bomb. I want thirty thousand dollars for it.

[SHIV laughs, as a matter of principle. He always laughs the first time a price is named.]

It will fetch many times that on the market. Iraq, Iran, Libya, North Korea all have nuclear weapons programs, but they don't have the technology to produced enriched fissile material. They're desperate for it; there's no price they wouldn't pay for an atomic bomb.

- SHIV: I don't know anything about selling this stuff...
- TIMOFEY: Don't be a fool. Neither do I. That's why I've come here. But you say you're a businessman. You must have contacts, people with money, people who can get it out of the country.
 - SHIV: [grunts] Maybe I do, maybe I don't.

TIMOFEY: Make up your mind.

- SHIV: Where's the stuff?
- TIMOFEY: With me.

[A predatory look flicks on in SHIV's eyes. But TIMOFEY had expected that. He slowly unbuttons his jacket. It falls away to reveal an invention of several hours' work: under his arm a steel canister no bigger than a coffee tin is attached to his left side by an impenetrably complex arrangement of belts, straps, hooks, and buckles.]

- CHORUS 1: Timofey didn't realize until he assembled the mechanism in his kitchen the morning after the accident that he'd been planning this for years.
- CHORUS 2: His whole body had been seared with wonder at the dark soul that inhabited it.
- TIMOFEY: Do you see how I rigged the container? There's a right way of taking it off my body and many wrong ways. Take it off one of the wrong ways and the container opens and the material spills out. Are you aware of the radiological properties of plutonium and their effect on living organisms?

[SHIV laughs]

- CHORUS 1: Shiv knew a girl once who wore something like this.
- CHORUS 2: He'd always wanted to fuck her.
 - SHIV: Let me see it.
- TIMOFEY: It's *plutonium*. It has to be examined under controlled laboratory conditions. If even a microscopic amount of it lodges within your body, ionizing radiation will irreversibly damage body tissue and your cells' nucleic material. A thousandth of a gram is fatal...I'll put it to you more simply. Anything it touches dies. It's like in a fairy tale.
- CHORUS 1: Little red riding hood met the wolf in the woods
- CHORUS 2: and died.
- CHORUS 1: The prince seized hold of Rapunzel's long hair
- CHORUS 2: and instantly died.
- CHORUS 1: The clock struck midnight at Cinderella's ball

CHORUS 2: and she dropped dead.

SHIV: So, there was an accident. How do I know the stuff's still good?

- TIMOFEY: Do you know what a half-life is? The half-life of plutonium 239 is twentyfour thousand years.
- CHORUS 2: The half-life of plutonium-239 is twenty-four thousand years.
 - SHIV: That's what you're telling me...
- TIMOFEY: You can look it up.
 - SHIV: What am I, a fucking librarian? Listen, I know this game. It's mixed with something.
- TIMOFEY: Yes, of course. The sample contains significant amounts of uranium and other plutonium isotopes, plus trace quantities of americium and gallium. But the Pu-239 content is 94.7 percent.
 - SHIV: So you admit it's not the first-quality stuff.
- TIMOFEY: Anything greater than 93 percent is considered weapons-grade. Look, do you have somebody you can bring this to? Otherwise, we're wasting my time.

[SHIV takes out another cigarette from his jacket and taps it on the back of his hand. He ignites the lighter, his finger lingering on the gas feed.]

- SHIV: Yeah, I do, but he's in Perkhuskovo. It's a forty-minute drive. I'll take you to him.
- TIMOFEY: I have a car. I'll follow you.
 - SHIV: That won't work. His dacha's protected. You can't go through the gate alone.
- TIMOFEY: Forget it then. I'll take the material someplace else.

[SHIV's shrug of indifference is almost sincere.]

- SHIV: If you like. But for a deal like this, you'll need to go to one godfather or another. On your own you're not going to find someone walking around with thirty thousand dollars in his pocket. This businessman knows me, his staff knows me. I'll go with you in your car. You can drive.
- TIMOFEY: No, we each drive separately.

- SHIV: [conciliatory] All right. Maybe. I'll call him from the lobby and try to set it up. I'm not even sure he can see us tonight.
- TIMOFEY: It has to be tonight or there's no deal.
 - SHIV: Don't be in such a hurry. You said the stuff lasts twenty-four thousand years, right?
- CHORUS 1: Timofey had vomited, twice, within a few hours of the accident.
- CHORUS 2: Medically speaking, this was precipitated by the wholesale shedding of epithelial tissue along the length of his digestive tract.
- CHORUS 1: The indication was death in three months time. At most.
- CHORUS 2: Radiation erythema were already inflaming the skin around his eyes and nose.
- TIMOFEY: Tell him I'm from Skotoprigonyevsk-16. Tell him it's weapons-grade. That's all he needs to know. Do you understand the very least bit of what I'm saying?

[A blue flash.]

TIMOFEY driving.

- CHORUS 1: Timofey drove the old Zhiguli that he had bought precisely so he could arrive home a half-hour earlier than if he had taken the tram.
- CHORUS 2: The vehicle was purchased not long after his marriage, late in his fourth decade, to an electrical engineer assigned to another unit.
- CHORUS 1: With the attentiveness he had once offered the reactor, Timofey would sit across the kitchen table from his wife with his head cocked
- CHORUS 2: listening to their spindly eight-year-old son, Tolya, in the next room give ruinous commands to his toy soldiers.
- TIMOFEY: Marina?
- CHORUS 1: He often filled his drives with conversations with his wife.
- TIMOFEY: I never thought it would be smoke and fire.

- CHORUS 1: Imagining their little jewel of a two-bedroom apartment, high on the eighth floor of a weather-stained concrete tower; remembering the lingering smell of fresh bread and meat dumplings.
- TIMOFEY: Marina?
- CHORUS 2: [As Marina.] I'm here, Timofey.
- TIMOFEY: I had hoped I would see the Medusa. When my time came. That I would see the blue glow...
- C.2/MARINA: Cherenkov radiation. You've told me.
 - TIMOFEY: The charged particles leave a visible shock wave as they flare past the speed of light in water. A blue flash, and a quick death. Medusa.
- C.2/MARINA: What is Moscow like, Timofey? It is so hard to see.

[Both chorus members don dark welding goggles.]

TIMOFEY: I've never seen so many foreign cars. Everyone drives as if from the edge of their seats—as if they all had three hundred grams of weapons-grade pluto-nium strapped to their chests.

Tolya would love it, Marina. All the Audis...

C.2/MARINA: And Mercedes?

TIMOFEY: And Mercedes.

Why are all the advertisements in the Latin alphabet?

- Is Cyrillic no longer anything but a folk custom?
- C.2/MARINA: Timofey.
 - TIMOFEY: It's like I'm in the capital of a country in which I've never lived, Marina.
- C.2/MARINA: There's no advertising in 16.
 - TIMOFEY: These days 16 is not much of a city, my love.
 - CHORUS 1: Sometime in the next three months Timofey would die with Plutonium in his body,
 - TIMOFEY: joined in the same year by thousands of other victims in Russia and around the world.

C.2/MARINA: People get cancer all the time, Timofey.

TIMOFEY: And never know why.

- CHORUS 1: A nucleic acid on a DNA site is knocked out of place, a chromosome is deleted, an oncogene is activated.
- TIMOFEY: No one ever knows why.
- C.2/MARINA: Where are we, Timofey?
 - CHORUS 1: For a moment, Timofey didn't know. When he realized which major throughway he was on, he considered leaving Shiv and driving through the night, back to 16, back home, back to Marina.
 - TIMOFEY: Shiv's pulled into the turning lane. We're in Novy Arbat, love.
 - CHORUS 1: Shiv saw Timofey's shudder of indecision in the rear view mirror, but to his dismay Timofey swung into the turn lane behind him. Shiv had been hoping the mark would turn tail. If he had, Shiv would have taken off in a shriek of tire and chased him down. He would have enjoyed that.
- C.2/MARINA: You can more easily evade him at the exit off Kutuzovsky Prospect. And there's another turnoff on the next road. And another. Another here...
 - TIMOFEY: I've lost track.
 - CHORUS 1: Soon they were kicking up stones on a dark country road, the only traffic.
- C.2/MARINA: The Moscow river on the right.
 - TIMOFEY: Lights behind me.
 - CHORUS 1: As they crossed the bridge, Shiv braked. The car behind bumped his rear bumper. Timofey came to a stop, blocked in by cars front and rear.

On a bridge over the Moscow River

SHIV: [Tapping on the door.] We have to talk. Open it.

[TIMOFEY hesitates for a moment, but reaches over an unlocks the door. SHIV slids into the passenger seat and stretches his legs.]

TIMOFEY: We're here?

SHIV: Where else could we be?

[TIMOFEY peers into the dark, looking for the businessman's dacha. There is nothing to see at all.]

[SHIV pulls on dark welding goggles.]

All right, now hand over the stuff.

TIMOFEY: Look, let's do this right-

[Comprehension darkens his face. No need to consider an escape, he understands the whole setup.]

I see. You're as foolish as a peasant in a fairy tale.

[SHIV opens his coat and removes from a holster in his sport jacket an oiled straight blade nearly twenty centimeters long. He turns it so that the moonlight runs its length. He looks into TIMOFEY's face for fear, but finds ridicule.]

You're threatening me with a knife? I have enough plutonium in my lungs to power a small city for a year, and you're threatening me with a *knife*?

[SHIV places the shaft against TIMOFEY's side, hard enough to leave a mark even if it were removed. TIMOFEY acts as if he didn't feel it.]

- SHIV: Look, this is a high-carbon steel Premium Gessl manufactured by Imperial Gessl in Frankfurt, Germany. I paid eighty bucks for it. It passes through flesh like water. Just give me the goddamned stuff.
- TIMOFEY: *[primly]* No. I won't do that. I want thirty thousand dollars. It's a fair price, I think, and I won't settle for anything less. I drove here in good faith.

[SHIV stabs TIMOFEY, viciously. But it's like stabbing a ghost.]

TIMOFEY is dead.

[SHIV sits alone in the car, aware of the hiss of his lungs, and that his armpits are wet.]

- CHORUS 1: Shiv is glad now that the mark drove his own car.
- CHORUS 2: Even though there wasn't even much blood.

[SHIV opens and pushes away TIMOFEY's brown sports jacket. The canister's there, still strapped to TIMOFEY's chest. SHIV attempts to follow where the straps go, or what is being buckled or snapped, but the configuration taunts him with its intricacy.]

SHIV: Fuck it.

[SHIV takes the Gessl and cuts the thin strap above the cylinder with two quick strokes.]

[The pieces of the strap fly away with a snap and the entire assembly loses the tension that had kept it wrapped around TIMOFEY's body. The canister pops open and falls against the gearshift. Powder spills out, but not much.]

[SHIV grabs the canister and shovels back some of what was on the seat—at least a few thousand dollars' worth, according to his reckoning.]

- CHORUS 1: The powder is warm in his hands.
- CHORUS 2: Warm and gritty.
- CHORUS 1: A single grain
- CHORUS 2: lodges under his pinky fingernail.

[SHIV scoops in as much as he can, screws the cylinder shut, and dusts his hands against his trousers. He cuts away the rest of the straps from the cylinder and leaves them draped on TIMOFEY's body. He gets out of the car.]

Outside the car. ANDREI and YEGOR.

- CHORUS 1: [As YEGOR.] Yegor
- CHORUS 2: [As ANDREI.] and Andrei
- CHORUS 1: stood nearly two meters tall, on either side of their car
- CHORUS 2: which was still parked flush with Timofey's bumper.
- CHORUS 1: Shiv, who had called them from the lobby
- CHORUS 2: thought of them as pure muscle.

- CHORUS 1: Certainly by most standards of measurement
- CHORUS 2: they were of equally deficient intelligence.

SHIV: Good work, lads.

- C.1/YEGOR: What do you got there?
 - SHIV: You wouldn't understand, believe me.[SHIV notices for the first time that ANDREI is holding a small pistol at his hip, leveling it directly at SHIV.]Put it away. What did you think, I was going to cut you out?
- C.1/YEGOR: [steps toward him, his arm outstretched.] Hand it over.
 - SHIV: All right, you've got the drop on me. I admit it. I'll put it in writing if you like. They'll be talking about this for years. But you're not going to be able to move it on your own.
- C.2/ANDREI: Why not?

[ANDREI raises the gun with both hands, trembling.] You think we're stupid.

- SHIV: If you want to show me how smart you are, you'll put down the fucking gun.
- C.2/ANDREI: I don't have to show you anything.

SHIV: Listen, this is plutonium. Do you know what it is?

- C.2/ANDREI: Yeah, I know.
 - SHIV: Do you know what's it's used for?
- C.2/ANDREI: I don't got to know. All I got to know is that people will buy it. That's the free market.
 - SHIV: Idiot! Who are you going to sell it to?
- C.2/ANDREI: Private enterprise. They'll buy it from us just like they'd buy it from you. And did you call me an idiot?
 - SHIV: Listen, I'm just trying to explain to you—[SHIV thinks for moment]—the material's radiological properties.

[ANDREI shoots SHIV in the head. Slow motion. We see the terror in SHIV's eyes. The recoil in ANDREI's gun is exaggerated, tremendous. ANDREI has never shot a man before.]

C.2/ANDREI: Well, fuck you. Go to a fucked mother.

[Neither brother says anything for a while.]

- C.1/YEGOR: [guffaws] Look at this mess—you fucking near tore off his head.
 [ANDREI can tell his brother was proud of him. He feels a surge of love.]
 Well, fuck. [Shaking his head in wonder.] It's really a mess. How are we going to clean it up? It's all over the car. Shit, it's on my pants.
- C.2/ANDREI: Let's just take the stuff and leave.
- C.1/YEGOR: Go through his pockets. He always carries a roll. I'll check the other guy.
- C.2/ANDREI: No, it's too much blood. I'll go through the other guy's pockets.
- C.1/YEGOR: Look, it's like I've been telling you, that's what's wrong with this country. People don't accept the consequences of their actions. Now, *you* put a hole in the guy's head, *you* go through his pockets.

[ANDREI scowls, but quickly runs his hands through SHIV's trousers, jacket, and coat anyway. The body stirs and something like a groan bubbles from SHIV's blood-filled mouth. Some of the blood trickles onto ANDREI's hand. It is disgustingly warm and viscid. ANDREI snatches his hand away and wipes it on SHIV's jacket. More carefully, he reaches into the inside jacket pocket and pulls out a gold-colored money clip with some rubles, about ten twenty dollar bills, a few tens, and a creased five. He slips the clip and four or five of the twenties into his pocket and stacks the rest on the car's trunk.]

- C.2/ANDREI: Not much, just some cash.
- C.1/YEGOR: [Emerging from the car] There's nothing at all on this guy, only rubles.

[ANDREI doubts this.]

I wonder what the stuff's like?

[YEGOR takes the closed canister from SHIV's lap. He places it next to the money and pulls off the top, revealing a coarse, silvery gray powder.]

[He wets his finger, pokes it into the container and removes a fingerprint's worth. He tastes it. It is chalky.]

What did he call it?

C.2/ANDREI: Plutonium. From Bolivia, he said.

[ANDREI reaches in, takes a pinch of the powder, and places it on the back of his left hand. He closes his right nostril with a finger and brings the stuff up to his face. He imagines he's in Chicago or Miami. He sniffs up the powder. It burns.]

It's crap. It's complete crap. Crap, crap, crap!

[In slow motion, ANDREI hoists the open container, brings it behind his head, and with a grunt and a cry, hurls it far into the night sky.]

[A blue flash.]

TIMOFEY: [Putting on dark welding goggles.] The open canister soared.

SHIV: For a moment, as it reached the top of its ascent beyond the bridge

- TIMOFEY: it caught a piece of moonlight on its sides.
- CHORUS 2: It looks like a little crescent moon itself
- CHORUS 1: in orbit above the earth
- TIMOFEY: the stuff forever pluming behind it.
- CHORUS 2: Stars
- CHORUS 1: Atoms
- TIMOFEY: Their nuclei surrounded by hairy penumbrae of indeterminately placed electrons;
 - SHIV: the nuclei themselves pulsing with indeterminacy
- CHORUS 1: their masses slightly larger
- CHORUS 2: than the sum of their parts.
- TIMOFEY: Bombarded by neutrons, some burst. Everything was quiet for a moment.
- CHORUS 1: Then
- CHORUS 2: there was
 - SHIV: a distant

TIMOFEY: splash

ALL: as the container plunged into the river.

[A faint blue flash.]

- CHORUS 1: The two brothers turned toward each other
- CHORUS 2: one with a gun
- TIMOFEY: and everything was quiet again.

[BLACKOUT]