

BY KIM STANLEY ROBINSON

The Memory of Whiteness

Icehenge

Three Californias

The Wild Shore

The Gold Coast

Pacific Edge

The Planet on the Table

Remaking History

Escape from Kathmandu

A Short Sharp Shock

The Mars Trilogy

Red Mars

Green Mars

Blue Mars

The Martians

Antarctica

The Years of Rice and Salt

Science in the Capital

Forty Signs of Rain

Fifty Degrees Below

Sixty Days and Counting

Galileo's Dream

2312

Shaman

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KIM STANLEY ROBINSON



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PART ONE

THE TYRANNY OF SUNK COSTS

a) Mutt and Jeff

Whoever writes the code creates the value.”
“That isn’t even close to true.”

“Yes it is. Value resides in life, and life is coded, like with DNA.”

“So bacteria have values?”

“Sure. All life wants things and goes after them. Viruses, bacteria, all the way up to us.”

“Which by the way it’s your turn to clean the toilet.”

“I know. Life means death.”

“So, today?”

“Some today. Back to my point. We write code. And without our code, there’s no computers, no finance, no banks, no money, no exchange value, no value.”

“All but that last, I see what you mean. But so what?”

“Did you read the news today?”

“Of course not.”

“You should. It’s bad. We’re getting eaten.”

“That’s always true. It’s like what you said, life means death.”

“But more than ever. It’s getting too much. They’re down to the bone.”

“This I know. It’s why we live in a tent on a roof.”

“Right, and now people are even worried about food!”

“As they should. That’s the real value, food in your belly. Because you can’t eat money.”

“That’s what I’m saying!”

“I thought you said the real value was code. Something a coder would say, may I point out?”

“Mutt, hang with me. Follow what I’m saying. We live in a world where people pretend money can buy you anything, so money becomes the point, so we all work for money. Money is thought of as value.”

"Okay. I get that. We're broke and I get that."

"So good, keep hanging with me. We live by buying things with money, in a market that sets all the prices."

"The invisible hand."

"Right. Sellers offer stuff, buyers buy it, and in the flux of supply and demand the price gets determined. It's crowdsourced, it's democratic, it's capitalism, it's the market."

"It's the way of the world."

"Right. And it's always, always wrong."

"What do you mean wrong?"

"The prices are always too low, and so the world is fucked. We're in a mass extinction event, sea level rise, climate change, food panics, everything you're not reading in the news."

"All because of the market."

"Exactly! It's not just that there are market failures. It's that the market is a failure."

"How so?"

"Things are sold for less than it costs to make them."

"That sounds like the road to bankruptcy."

"Yes, and lots of businesses do go bankrupt. But the ones that don't haven't actually sold their thing for more than it cost to make. They've just ignored some of their costs. They're under huge pressure to sell as low as they can, because every buyer buys the cheapest version of whatever it is. So they shove some of their production costs off their books."

"Can't they just pay their labor less?"

"They already did that! That was easy. That's why we're all broke except the plutocrats."

"I always see the Disney dog when you say that."

"They've squeezed us till we're bleeding from the eyes. I can't stand it anymore."

"Blood from a stone. Sir Plutocrat, chewing on a bone."

"Chewing on my head! But now we're chewed up. We're squeeze dry. We've been paying a fraction of what things really cost to make, but meanwhile the planet, and the workers who made the stuff, take the unpaid costs right in the teeth."

"But they got a cheap TV out of it!"

"Right, so they can watch something interesting as they sit there broke."

"Except there's nothing interesting on."

"Well, but this is the least of their problems! I mean actually you can usually find something interesting."

"Please, I beg to differ. We've seen everything a million times."

"Everyone has. I'm just saying the boredom of pad TV is not the biggest of our worries. Mass extinction, hunger, wrecking kids' lives, these are bigger worries. And it just keeps getting worse. People are suffering more and more. My head is going to explode the way things are going, I swear to God."

"You're just upset because we got evicted and are living in a tent on a roof."

"That's just part of it! A little part of a big thing."

"Okay, granted. So what?"

"So look, the problem is capitalism. We've got good tech, we've got a nice planet, we're fucking it up by way of stupid laws. That's what capitalism is, a set of stupid laws."

"Say I grant that too, which maybe I do. So what can we do?"

"It's a set of laws! And it's global! It extends all over the Earth, there's no escaping it, we're all in it, and no matter what you do, the system rules!"

"I'm not seeing the what-we-can-do part."

"Think about it! The laws are *codes*! And they exist in computers and in the cloud. There are sixteen laws running the whole world!"

"To me that seems too few. Too few or too many."

"No. They're articulated, of course, but it comes down to sixteen basic laws. I've done the analysis."

"As always. But it's still too many. You never hear about sixteen of anything. There are the eight noble truths, the two evil sisters. Maybe twelve at most, like recovery steps, or apostles, but usually it's single digits."

"Quit that. It's sixteen laws, distributed between the World Trade Organization and the G20. Financial transactions, currency exchange, trade law, corporate law, tax law. Everywhere the same."

"I'm still thinking that sixteen is either too few or too many."

"Sixteen I'm telling you, and they're encoded, and each can be changed by changing the codes. Look what I'm saying: you change those sixteen, you're like turning a key in a big lock. The key turns, and the system goes from bad to good. It helps people, it requires the cleanest techs, it restores landscapes, the extinctions stop. It's global, so detectors can't get outside it. Bad money gets turned to dust, bad actions likewise. No one could cheat. It would *make* people be good."

"Please Jeff? You're sounding scary."

"I'm just saying! Besides, what's scarier than right now?"

"Change? I don't know."

"Why should change be scary? You can't even read the news, right? Because it's too fucking scary?"

"Well, and I don't have the time."

Jeff laughs till he puts his forehead on the table. Mutt laughs too, to see his friend so amused. But the mirth is very localized. They are partners, they amuse each other, they work long hours writing code for high-frequency trading computers uptown. Now some reversals have them on this night living in a horello on the open-walled farm floor of the old Met Life tower, from which vantage point lower Manhattan lies flooded below them like a super-Venice, majestic, watery, superb. Their town.

Jeff says, "So look, we know how to get into these systems, we know how to write code, we are the best coders in the world."

"Or at least in this building."

"No come on, the world! And I've already gotten us in to where we need to go."

"Say what?"

"Check it out. I built us some covert channels during that gig we did for my cousin. We're in there, and I've got the replacement codes ready. Sixteen revisions to those financial laws, plus a kicker for my cousin's ass. Let the SEC know what he's up to, and also fund the SEC to investigate that shit. I've got a subliminal stunt set up that will tap some alpha and move it right to the SEC's account."

"Now you really are scaring me."

"Well sure, but look, check it out. See what you think."

Mutt moves his lips when he reads. He's not saying the words silently to himself, he's doing a kind of Nero Wolfe stimulation of his brain. It's his

favorite neurobics exercise, of which he has many. Now he begins to massage his lips with his fingers as he reads, indicating deep worry.

"Well, yeah," he says after about ten minutes of reading. "I see what you've got here. I like it. I guess. Most of it. That old Ken Thompson Trojan horse always works, doesn't it. Like a law of logic. So, could be fun. Almost sure to be amusing."

Jeff nods. He taps the return key. His new set of codes goes out into the world.

They leave their horello and stand at the railing of their building's farm, looking south over the drowned city, taking in the whitmanwonder of it. O Mannahatta! Lights squiggle off the black water everywhere below them. Downtown a few lit skyscrapers illuminate darker towers, giving them a geological sheen. It's weird, beautiful, spooky.

There's a ping from inside their horello, and they push through the flap into the big square tent. Jeff reads his computer screen.

"Ah shit," he says. "They spotted us."

They regard the screen.

"Shit indeed," Mutt says. "How could they have?"

"I don't know, but it means I was right!"

"Is that good?"

"It might even have worked!"

"You think?"

"No." Jeff frowns. "I don't know."

"They can always recode what you did, that's the thing. Once they see it."

"So do you think we should run for it?"

"To where?"

"I don't know."

"It's like you said before," Mutt points out. "It's a global system."

"Yeah but this is a big city! Lots of nooks and crannies, lots of dark pools, the underwater economy and all. We could dive in and disappear."

"Really?"

"I don't know. We could try."

Then the farm floor's big service elevator door opens. Mutt and Jeff regard each other. Jeff thumbs toward the staircases. Mutt nods. They slip out under the tent wall.

b) Inspector Gen

To be brief about it—
proposed Henry James

Inspector Gen Octaviasdortir sat in her office, late again, slumped in her chair, trying to muster the energy to get up and go home. Light fingernail drumming on her door announced her assistant, Sergeant Olmstead.

“Sean, quit it and come in.”

Her mild-mannered young bulldog ushered in a woman of about fifty. Vaguely familiar-looking. Five seven, a bit heavy, thick black hair with some white strands. City business suit, big shoulder bag. Wide-set intelligent eyes, now observing Gen sharply; expressive mouth. No makeup. A serious person. Attractive. But she looked as tired as Gen felt. And a little uncertain about something, maybe this meeting.

“Hi, I’m Charlotte Armstrong,” the woman said. “We live in the same building, I think. The old Met Life tower, on Madison Square?”

“I thought you looked familiar,” Gen said. “What brings you here?”

“It has to do with our building, so I asked to see you. Two residents have gone missing. You know those two guys who were living on the farm floor?”

“No.”

“They might have been nervous to talk to you. Although they had permission to stay.”

The Met tower was a co-op, owned by its residents. Inspector Gen had recently inherited her apartment from her mother, and she paid little attention to how the building was run. Often it felt like she was only there to sleep. “So what happened?”

“No one knows. They were there one day, gone the next.”

“Someone’s checked the security cameras?”

“Yes. That’s why I came to see you. The cameras went out for two hours on the last night they were seen.”

“Went out?”

“We checked the data files, and they all have a two-hour gap.”

"Like a power outage?"

"But there wasn't a power outage. And they have battery backup."

"That's weird."

"That's what we thought. That's why I came to see you. Vlade, the building super, would have reported it, but I was coming here anyway to represent a client, so I filed the report and then asked to speak to you."

"Are you going back to the Met now?" Gen asked.

"Yes, I was."

"Why don't we go together, then. I was just leaving." Gen turned to Olmstead. "Sean, can you find the report on this and see what you can learn about these two men?"

The sergeant nodded, gazing at the floor, trying not to look like he'd just been given a bone. He would tear into it when they were gone.

Armstrong headed toward the elevators and looked surprised when Inspec-
for Gen suggested they walk instead.

"I didn't think there were skybridges between here and there."

"Nothing direct," Gen explained, "but you can take the one from here to Bellevue, and then go downstairs and cross diagonally and then head west on the Twenty-third Skyline. It takes about thirty-four minutes. The vapo would take twenty if we got lucky, thirty if we didn't. So I walk it a lot. I can use the stretch, and it will give us a chance to talk."

Armstrong nodded without actually agreeing, then hauled her shoulder bag closer to her neck. She favored her right hip. Gen tried to remember anything from the Met's frequent bulletins. No luck. But she was pretty sure this woman had been the chairperson of the co-op's executive board since Gen had moved in to take care of her mom, which suggested three or four terms in office, not something most people would volunteer for. She thanked Armstrong for this service, then asked her about it. "Why so long?"

"It's because I'm crazy, as you seem to be suggesting."

"Not me."

"Well, you'd be right if you did. It's just that I'm better working on things than not. I experience less stress."

"Stress about how our building runs?"

"Yes. It's very complicated. Lots can go wrong."

"You mean like flooding?"

"No, that's mostly under control, or else we'd be screwed. It takes attention, but Vlade and his people do that."

"He seems good."

"He's great. The building is the easy part."

"So, the people."

"As always, right?"

"Sure is in my line of work."

"Mine too. In fact the building itself is kind of a relief. Something you can actually fix."

"You do what kind of law?"

"Immigration and intertidal."

"You work for the city?"

"Yes. Well, I did. The immigrant and refugee office got semiprivatized last year, and I went with it. Now we're called the Householders' Union. Supposedly a public-private agency, but that just means both sides ignore us."

"Have you always done that kind of thing?"

"I worked at ACLU a long time ago, but yeah. Mostly for the city."

"So you defend immigrants?"

"We advocate for immigrants and displaced persons, and really anyone who asks for help."

"That must keep you busy."

Armstrong shrugged. Gen led her to the elevator in Bellevue's northwest annex that would take them down to the skybridge that ran west from building to building on the north side of Twenty-third. Most skybridges still ran either north-south or east-west, forcing what Gen called knight moves. Recently some new higher skybridges made bishop moves, which pleased Gen, as she played the find-the-shortest-route game when getting around the city, played it with a gamer's passion. Shortcutting, some players called it. What she wanted was to move through the city like a queen in chess, straight to her destination every time. That would never be possible in Manhattan, just as it wasn't on a chessboard; grid logic ruled both. Even so, she would visualize the destination in her head and walk the straightest line she could think of toward it—design improvements—measure success on her writ. All simple compared to the rest of her work, where she had to navigate much vaguer and nastier problems.

Armstrong stumped along beside her. Gen began to regret suggesting the walk. At this pace it was going to take close to an hour. She asked questions about their building to keep the lawyer distracted from her discomfort. There were about two thousand people living in it now, Armstrong answered. About seven hundred units, from single-person closets to big group apartments. Conversion to residential had occurred after the Second Pulse, in the wet equity years.

Gen nodded as Charlotte sketched this history. Her father and grandmother had both served on the force through the flood years, she told Armstrong. Keeping order had not been easy.

Finally they came to the Met's east side. The skybridge from the roof of the old post office entered the Met at its fifteenth floor. As they pushed through the triple doors Gen nodded to the guard on duty, Manuel, who was chatting to his wrist and looked startled to see them. Gen looked back out the glass doors; down at canal level the bathtub ring exposed by low tide was blackish green. Above it the nearby buildings' walls were greenish limestone, or granite, or brownstone. Seaweed struck to the stone below the high tide line, mold and lichen above. Windows just above the water were barred with black grilles; higher they were unbarred, and many open to the air. A balmy night in September, neither stifling nor steamy. A moment in the city's scandalous weather to bask in, to enjoy.

"So these missing guys lived on the farm floor?" Gen asked.

"Yes. Come on up and take a look, if you don't mind."

They took an elevator to the farm, which filled the open-walled loggia of the Met tower from the thirty-first to the thirty-fifth floors. The tall open floor was jammed with planter boxes, and the air in the space was filled with hydroponic balls of leafy green. The summer's crop looked ready for harvest: tomatoes and squash, beans, cucumbers and peppers, corn, herbs, and so on. Gen spent very little time in the farm, but she did like to cook once in a while, so she put in an hour a month to be able to make a claim. The cilantro was bolting. Plants grew at different speeds, just like people.

"They lived here?"

"That's right, over in the southeast corner near the toolshed."

"For how long?"

"About three months."

"I never saw them."

"People say they kept to themselves. They lost their previous housing somehow, so Vlade set up a hotello they brought with them."

"I see." Hotelles were rooms that could be packed into a suitcase. They were often deployed inside other buildings, being not very sturdy. Usually they provided private space inside crowded larger spaces.

Gen wandered the farm, looking for anomalies. The loggia's arched open walls had a railing embrasure that was chest high on her, and she was a tall woman. Looking over the rail she saw a safety net about six feet below. They circled inside arches and came to the hotello in the southeast corner. She knelt to inspect the rough concrete floor: no sign of anything unusual. "Forensics should take a closer look at this."

"Yes," Armstrong said.

"Who gave them permission to live here?"

"The residency board."

"They aren't running out on rent or anything."

"No."

"Okay, we'll do the full missing persons routine."

The situation had some oddities that were making Gen curious. Why had the two men come here? Why had they been accepted when the building was already packed?

As always, the list of suspects began in the ring of immediate acquaintance.

"Do you think the super might be in his office?"

"He usually is."

"Let's go talk to him."

They took the elevator down and found the super sitting at a worktable that filled one wall of an office. The wall beside it was glass and gave a view of the Met's big boathouse, the old third story, now water-floored.

The super stood and said hi. Gen had seen him around in the usual way. Vlade Marovich. Tall, broad-chested, long-limbed. A bunch of slabs thrown together. Six two, black hair. Head like a block of wood hewn by an ax. Slavic unease, skepticism, bit of an accent. Discontented around police, maybe. In any case, not happy.

Gen asked questions, watched him describe what had happened from his perspective. He was in a position to make the security cameras malfunction. And he did seem wary. But also weary. Depressed people did not

usually engage in criminal conspiracies, Gen had long ago concluded. But you never knew.

"Shall we get dinner?" she asked them. "I'm suddenly starving, and you know the dining hall. First come only served."

The other two were well aware of this.

"Maybe we can eat together and you can tell me more. And I'll push the investigation at the station tomorrow. I'll want a list of all the people who work for you on the building," she said to Vlade. "Names and files."

He nodded unhappily.

The choice of the discount rate becomes decisive for the whole analysis. A low discount rate makes the future more important, a high discount rate is dismissive of the future.

—Frank Ackerman, *Can We Afford the Future?*

The moral is obvious. You can't trust code that you did not totally create yourself.

Misguided use of a computer is no more amazing than drunk driving of an automobile.

—Ken Thompson, "Reflections on Trusting Trust"

A bird in the hand is worth what it will bring.

noted Ambrose Bierce

c) Franklin

Numbers often fill my head. While waiting for my building's morose super to free my Jesus bug from the boathouse rafters where it had spent the night, I was looking at the little waves lapping in the big doors and wondering if the Black-Scholes formula could frame their volatility. The canals were like a perpetual physics class's wave-tank demonstration—backwash interference, the curve of a wave around a right angle, the spread of a wave through a gap, and so on—it was very suggestive as to how liquidity worked in finance as well.

Too much time to give to this question, the super being so sullen and slow: New York parking! One can do nothing but practice patience. Eventually the zoomer was mine to step into, off the boathouse dock and then out the doorway onto the shadowed surface of the Madison Square bacino. Nice day, crisp and clear, sunlight pouring down the building canyons from the east.

As on most weekdays, I hummed the bug east on Twenty-third into the East River. It would have been shorter to burble south through the city canals, but even just past dawn the southward traffic on Park was terrible, and would only get worse at the Union Square bacino. Besides I wanted to fly a little before settling in to work, I wanted to see the river shine.

The East River too was busy with its usual morning traffic, but there was still room in the fast southbound lane to plane up onto the Jesus bug's curving hydrofoils and fly. As always the lift off the water was exhilarating, a rise like a seaplane taking off, some kind of nautical hard-on, after which the boat flew over its magic carpet of air some six feet off the river, with only the two streamlined composite foils shearing through the water below, flexing constantly to maximize lift and stability. A genius of a boat, zooming downriver in the autobahn lane, ripping through the

sun-battered wakes of the slowpokes, rip rip rip, man on a mission here, out of my way little barge, got to get to work and make my daily bread.

If the gods allow. I could take losses, could get shaved, get hosed, take a hammering, blow up—so many ways to say it!—although all were unlikely in my case, being well hedged and risk averse as I am, at least compared to many traders out there. But the risks are real, the volatility volatile; in fact it's the volatility that can't be factored into the partial differential equations in the Black-Scholes family, even when you shift them around to account for that quality in particular. It's what people bet on, in the end. Not whether an asset price will go up or down—traders win either way—but just how volatile the price will be.

All too soon my jaunt downriver got me offshore of Pine Canal, and I cut back on the jet and the bug plopped down into ordinary boathood, not like a goose crashing down, as in some hydrofoils, but gracefully, with nary a splash. After that I turned and thwopped across some big barge wakes, then hummed and gurgled into the city, moving at about the pace of the breaststrokes braving the toxicity in their daily suicide salute to the sun. The Pine Canal Seebad was weirdly popular, and they did indeed "see bad," pods of old breaststrokes in full drysuits and face masks, hoping the benefits of the aquatic exercise and the flotation itself counteracted the stew of heavy metals they inevitably took on. Got to admire the aqualove of anyone willing to get into the water anywhere in the greater New York harbor region, and yet of course people still did it, because people swim in their ideas. A great attribute of the species when it comes to trading with them.

The hedge fund I work for, WaterPrice, had its New York offices occupying all of the Pine Tower at Water and Pine. The building's waterbarn was four stories tall, the big old atrium now filled with watercraft of all types, hanging like model boats in a child's bedroom. A pleasure to see the foils curving under my trimaran's hulls as it was hoisted into place for the day. A nice perk, boathouse parking, if expensive. Then up the elevator to the thirtieth floor and over to the northwest corner, where I settled into my aerie, looking through a scattering of skybridges midtown, and the super-scrappers looming uptown in all their gehryglory.

I started the day as always, with a giant mug of cappuccino and a review of the closing markets in East Asia, and the midday markets in Europe.

The global hive mind never sleeps, but it does nap while crossing the width of the Pacific, a half-hour nap between when New York closes and Shanghai opens; this is the pause that puts the day into day trading.

On my screen was displayed all the parts of the global mind most concerned with drowned coastlines, my area of expertise. It wasn't really possible to understand at a single glance the many graphs, spreadsheets, crawl lines, video boxes, chat lines, sidebars, and marginalia displayed on the screen, much as some of my colleagues would like to pretend that it is. If they tried they would just miss things, and in fact a lot of them do miss things, thinking they are great gestalters. Expert overconfidence, that's called. No, one can glance at the totality, sure, but then it's important to slow down and take in the data part by part. That required a lot of shifting of gears these days, because my screen was a veritable anthology of narratives, and in many different genres. I had to shift between haiku and epics, personal essays and mathematical equations, Bildungsroman and Götterdämmerung, statistics and gossip, all telling me in their different ways the tragedies and comedies of creative destruction and destructive creation, also the much more common but less remarked-upon creative creation and destructive destruction. The temporalities in these genres ranged from the nanoseconds of high-frequency trading to the geological epochs of sea level rise, chopped into intervals of seconds, hours, days, weeks, months, quarters, and years. It was awesome to dive into such a complicated screen with the actual backdrop of lower Manhattan out the window, and combined with the cappuccino, and the flight down the river, it felt like dropping into a big breaking wave. The economic sublime!

At pride of place in the center of my screen was a Planet Labs map of the world with sea levels indicated to the millimeter by real-time satellite laser altimetry. Higher sea levels than the average for the previous month were shaded red, lower areas blue, gray for no change. Every day the colors shifted, marking the water's slopping around under the pull of the moon, the push of prevailing currents, the sweep of the winds, and so on. This perpetual rise and fall now got measured to an obsessive-compulsive degree, understandable given the traumas of the last century and the distinct possibility of future traumas. Sea level had for the most part stabilized after the Second Pulse, but there was still a lot of Antarctic ice teetering on the brink, so past performance was no guarantee of future anything.

So sea level got bet on, sure. Simple sea level itself served as the index, and you could say it got invested in or hedged against; you could say gone long or short on, but what it came down to was making a bet. Rise, hold steady, or fall. Simple stuff, but that was just the start. It joined all the other commodities and derivatives that got indexed and bet on, including housing prices, which were almost as simple as sea level. The Case-Shiller indexes, for instance, rated housing price changes, in blocks from the entire world to individual neighborhoods and everything in between, and people bet on all those too.

Combining a housing index with sea level was one way to view the drowned coastlines, and that was at the heart of what I did. My Intertidal Property Pricing Index was WaterPrice's great contribution to the Chicago Mercantile Exchange, used by millions to orient investments that totaled in the trillions. A great advertisement for my employers, and the reason my stock in house was high.

That was all very well, but to keep things humming along, the IPPi had to work, which is to say be accurate enough that people using it well could make money. So along with the usual hunt for small spreads, and sorting through the puts and calls deciding if I wanted to buy anything on offer, and checking on exchange rates, I was also looking for ways to bolster the accuracy of the index. Sea level in the Philippines up two centimeters, huge, people panicking, but not noticing the typhoon developing a thousand kilometers to the south: take a moment to buy their fear, before tweaking the index to register the explanation. High-frequency geofinance, the greatest game!

At some moment in the dream time of that afternoon's trading session, interrupted realworldistically only by the need to briefly pee and eat, my chatbox in the bottom left corner of my screen flickered, and I saw I had gotten a note from my trader friend Xi from Shanghai.

Hey Lord of Intertidal! Flash bite last night there, what happen?

Don't know, I typed in. Where can I see it?

EME

Well, the Chicago Mercantile Exchange is the biggest derivatives exchange on the planet, so I was thinking this was not much of a clue as to where this flash bite had happened, but then I tapped around a bit and

saw that everything on the CME had taken a quick but massive jolt the night before. For about a second around midnight, which seemed to suggest Shanghai as the source of the event, two points had been chopped out of every trade, which was enough to turn most of them from gains to losses. But then an equally instantaneous lift had come a second later. Like a mosquito bite, noticed only as an itch afterward.

WTF? I wrote to Xi.

Exactamundo! Earthquake? Gravitational wave? You Lord of Intertidal must elucidate me! **WINDIG.** I wrote back. I Would If I Could But I Can't. This was something traders said to each other all the time, either seriously or when making excuses. In this case I really would have if I could have, in terms of explicating this bite, but I couldn't, and there were other pressing matters facing me as the day waned. The light on the actual Manhattan out my window had shifted from right to left, Europe was closed, Asia was about to open, adjustments had to be made, deals finalized. I was not one of those traders who cleared the books at the end of every day, but I did like closure on the biggest outstranding risks, if I could get it. So I focused on those situations and tried to finish up.

I came to an hour or so later. Time to get out onto the canals and putter through traffic while there was still sun on the water, get out on the Hudson and get a little zoom-on headed north, blow all the numbers and gossip out of my head. Another day another dollar. About sixty thousand of them on this day, as estimated by a little program bar in the upper right corner of my screen.

I had put in an option for my boat at 4, and was able to strike on it with a call down at 3:55, and by the time I got down to the boathouse it was in the water ready to go, the dockmaster smiling and nodding as I tipped him. "My Franklin Franklin!" he said as always. I hate to wait.

Out onto the crowded canal. The other boats in the financial district were mostly water taxis and private boats like mine, but there were also big old vaporetta grumbling from dock to dock, jammed with workers let out for the last hour of day. I had to look sharp and pop through openings, surf wakes, angle for gaps, cut corners. Vaporetta as they pass each other slow down, to courteously reduce the size of their wakes; private watercraft speed up. It can be a wet business at rush hour, but my bug has a clear

bubble I can pull over the cockpit, and if it gets wild enough I use it. On this afternoon I took Malden to Church, then Warren to the Hudson.

Then out onto the big river. Late on an autumn day, the black water sheeting over a rising tide, a bar of sunlight microflaking across the middle of it right to me. Across the river the superscrapers of Hoboken looked like a jagged southern extension of the Palisades, black under pink-bottomed clouds. On the Manhattan side the many dock bars were all jammed with people off work and starting to party. Pier 57 was popular now with a group I knew, so I hummed into the marina south of it, very expensive but convenient, tied off the bug and went up to join the fun. Cigars and whiskey and watching women in the river sunset; I was trying to learn all these things, having only known prairie sunsets in my youth.

I had just joined my group of acquaintances when a woman walked up to the old delta-hedging guru Pierre Wrembel, her black hair gleaming in the horizontal light like a raven's wing. She kept her eyes on the famous investor, speaking beauty to power, which is perhaps more common than speaking truth to power, and definitely more effective. She had wide shoulders, muscular arms, nice tits. She looked great. I meandered to the bar to get a white wine like hers. It's best to meander at times like this, circle the room, make sure your first impression was correct. So much can be determined if you know how to look—or so I assume, as in fact I don't know how. But I tried. Was she friendly, self-conscious, wary, relaxed? Was she available to someone like me? Good to figure that out in advance if possible. Not that it would be wasting my time to chat in a bar with a good-looking woman, obviously, but I wanted to know as much as possible going in, because under the impact of a woman's direct gaze I am likely to suffer a mind wipe. I am way better at day trading than at judging women's intentions, but I know this and try to help myself if I can.

Also, circling allowed judgment of whether I really liked how she looked. Because on first impression I like every woman. I'm willing to say they are all beautiful in their own style, and mainly I wander the bars of New York thinking, Wow, wow, wow. What a city of beautiful women. It really is.

And to me, when you look at people's faces you're seeing their characters. It's scary: we're all too naked that way, not just literally, in that we don't conceal our faces with clothes, but figuratively, in that somehow

our true characters get stamped on the front of our heads like a map. An obvious map of our souls—I don't think it's appropriate, to tell the truth. Like living in a nudist colony. It must be an evolutionary thing, adaptive somehow no doubt, but looking in the mirror I could wish for a nicer face myself—meaning a nicer personality, I guess. And when I look around I'm thinking, Oh no! Too much information! We'd be better off wearing veils like Muslim women and showing only our eyes!

Because eyes aren't enough to tell you anything. Eyes are just blobs of colored gel, they aren't as revealing as I used to think. That whole idea that eyes are windows to the soul and tell you something important had been a matter of projection on my part.

This woman's eyes were hazel or brown, I couldn't be sure yet. I stood there at the bar and ordered my white wine and looked around, roving my eye in a pattern that kept returning to her. When she looked my way, because everyone in a bar looks around, I was talking to the bartender, my friend Enkidu, who claimed to be full-blooded Assyrian and went by Inky, and had had old green tattoos all over his forearms. Popeye? A can of spinach? He would never say. He saw what I was doing and kept working on drinks while at the same time giving my roving eye a cover story by chatting floridly with me. Yes, high tide in three hours. Later he was going to sling his hook and float down to Staten Island without even turning on his motor. Nicest part of the day, dusk under the blurry stars, lights on the water, ebbing tide, topless towers of Staten lighting up the night, blah blah on we went, either looking around or working, drinking or talking. Oh my, this woman was good-looking. Regal posture, like a volleyball player about to leave the ground. Smooth easy spike, right in my face.

So when she joined my group of acquaintances I slipped over to say hi to all, and my friend Amanda introduced me to those I didn't know: John and Ray, Evgenia, and Paula; and the regal one was named Joanna.

"Nice to meet you, Joanna," I said.

She nodded with an amused look and Evie said, "Come on, Amanda, you know Jojo doesn't like to be called Joanna!"

"Nice to meet you, Jojo," I said, with a mock elbow into Amanda's ribs. Good: Jojo smiled. She had a nice smile, and her eyes were light brown, the irises looking as if several browns had been kaleidoscoped. I smiled back as I tried to get past those beauties. I tried to stay cool. Come on, I said to myself

a little desperately, this is just what beautiful women see and despise in men, that drowning-in-the-whirlpool moment of agog admiration. Be cool!

I tried. Amanda helped by elbowing me back and complaining about some call option I had bought on the Hong Kong bond market, which had followed her lead but multiplied it by ten. Was I drafting her or accidentally spoofing? That was the kind of thing I could riff on all day, and Amanda and I went back months and were used to each other. She was beautiful too, but not my type, or something. We had already explored what there was to explore between us, which had consisted of a few dinners and a night in bed and nothing more, alas. Not my call, but I wasn't heartbroken either when she claimed business abroad and we went our separate ways. Of course I will like forever any woman who has gone to bed with me, as long as we don't become a couple and hate each other forever. But affinity is a funny thing.

"Oh she's such a JAP," Evie said to John.

"Jap?" he said ignorantly.

"Come on! Jewish American Princess, you ignoramus! Where did you grow up?"

"Lawn Guyland," John reparteed. Good laugh from us.

"Really?" Evie cried, also ignorantly.

John shook his head, grinning. "Laramie Wyoming, if you really want to know."

More laughs. "Is that really a town? That's not a TV show?"

"It is a town! Bigger than ever, now that the buffalo are back. We rule the buff futures market."

"You are buff."

"I am."

"Do you know the difference between a JAP and spaghetti?"

"No?"

"Spaghetti moves when you eat it!"

More laughs. They were pretty drunk. That might be good. Jojo was a little flushed but not drunk, and I was not even close. I am never drunk, unless by accident, but if I have been careful I will never be more than lightly buzzed. Nurse a single malt for an hour and then switch to ginger ale and biters, keep compos mentos. Jojo looked to be doing the same; tonic water had followed her white wine. That was good up to a point. A

woman does need a little wildness, maybe. I caught her eye and chinned at the bar

"Get you something?"

She thought it over. More and more I liked her.

"Yeah, but I don't know what," she said. "Here let's go check it out."

"My man Inky will make suggestions," I agreed. Oh Lordy, she was cutting me out of the rude-and-crudes! My heart did a little bouncy-bouncy.

We stood at the bar. She was a little taller than me, though not wearing heels. I almost swooned when I saw that, put my elbows on the bar to keep myself standing. I like tall women, and her waist was about as high as my sternum. Women wore high heels to look like her. Oh Lord.

Inky dropped by and we got something exotic he recommended that he had made up. A something or other. Tasted like bitter fruit punch. Crème de cassis involved.

"What's your name?" she asked with a sidelong glance.

"Franklin Garr."

"Franklin? Not Frank?"

"Franklin."

"As in, you be lyin', but I be Franklin?"

"Ben Franklin. My mom's hero. And my job needs a fair bit of lying, to tell the truth."

"What are you, a reporter?"

"Day trader."

"Me too!"

We looked at each other and smiled a little conspiratorially. "Where at?"

"Eldorado."

Oh my, one of the biggies. "What about you?" she asked.

"WaterPrice," I said, happy that we were substantial too. We chatted about that for a while, comparing notes on building location, work space, colleagues, bosses, quants. Then she frowned.

"Hey, did you look at the CME for yesterday?"

"Sure."

"Did you see that glitch? How for a while there was a glitch?" She saw my look of surprise and added, "You did!"

"Yes," I said. "What was it, do you know?"

"No. I was hoping you did."

I had to shake my head. I thought it over again. It was still mysterious.

"Seems like maybe tweakers must have gotten in?"

"But how? I mean, things can happen in China, things can happen here, but the CME?"

"I know." I had to shrug. "Mysterious."

She nodded, sipped her punch. "If that had gone on for long, it would have gotten a lot of attention."

"True." As in, end of world, but I didn't point that out, not wanting to make fun of her too soon. "But maybe it was just another flash bite."

"Well, it did come and go. Maybe it was somebody testing something."

"Maybe," I said, and thought that over.

After a moment of silent contemplation we had to talk about other things. It was too loud to think, and talking shop was only fun when you could hear the other person without shouting. Time to get back to basics, but also she was finishing her drink and going into leave-taking mode, or so it appeared from her aura. I didn't want to blow it; this was not going to be quick and I didn't want it to be, so it required some tact, but I can be very tactful, or at least try.

"Hey, listen, would you like to go out to dinner some Friday to celebrate the week?"

"Sure, where?"

"Somewhere on the water."

That made her smile. "Good idea."

"This Friday?"

"Sure."

d) Vlade

Windows split the city's great hell
Into tiny hells

—Vladimir Mayakovsky

From now on each new building strives to be "a City within a City."

—Rem Koolhaas

In King's "Dream of New York" illustration from 1908, the future city is imagined as clusters of tall buildings, linked here and there by aerial walkways, with dirigibles casting off from mooring masts, and planes and balloons floating low overhead. The point of view is from above and to the south of the city.

While working as a detective in New York, Dashiell Hammett was once assigned to find a Ferris wheel that had been stolen the year before in Sacramento.

Vlade's little apartment was located at the back of the boathouse office, down a set of broad stairs. The rooms had been part of the kitchen pantry when the building had been a hotel, and were below the waterline even at low tide. Vlade didn't mind this. Protection of the submerged floors was one of his main jobs in the building, interesting to manage and valued by the building's occupants, although they took it for granted when there were no problems. But the water work was never done, and never less than crucial. So it had become a little point of pride for him to sleep below, as if deep in the hull of a great liner for which he was ship's carpenter.

Methods to keep water out kept improving. Vlade was currently working with the team from the local waterproofing association that had caissoned the Madison Square side of the building to reseal the building's wall and the old sidewalk. The aquaculture cages covering the floor of the bacino had to be avoided, making for a tight squeeze, but the latest Dutch equipment could be angled and accorioned in a way that gave them room to work. Then new pumps, dryers, sterilizers, sealants—all better than ever, even though this same work gang had passed through only four years before. It made sense, as Ettore, the super for the Flatiron, pointed out; this work was the crux for every building in the drink. But Vlade kept thinking things were as good as they could get. Ettore and the others laughed at him when he said this. That's you, Vlade. They were a good group. Supers for the buildings of lower Manhattan formed a kind of club, all enmeshed with the mutual aid associations and cooperative groups that knitted together to make intertidal life its own society. Lots of complaints to share about all kinds of things, such as being paid in webbits and blocknecklaces, which some called torcs, as they were basically forms of indenture to the building, a fancy version of room and board—people

went on and on, but despite all the moaning they were lively and helped keep Vlade out of the depths.

On this day he woke in almost pitch-darkness. Green light from the clock cast hardly any illumination. He listened for a while. No rushing liquid except for his blood, moving sluggishly around in him. Internal tides, yes. Low tide in there, as on most mornings.

He pulled himself up and turned on the room light. The building screen reported all was well. Dry to bedrock: very satisfying. North building the same, or almost—some as-yet-unidentified crack was leaking into the foundation over there, very vexing. But he would find it.

He had slept four hours, as usual. That was all the time the building and his bad dreams gave him. Part of his low tide. Nothing to do but get up and go for it again. Up to the boathouse, to help Su get the dawn patrollers out the door and onto the canals. There were six lifts in the boathouse, and the boathouse computer provided them with a good sequencing algorithm. Where the human touch was still needed was in mollifying boat owners if their departure was delayed. Even a minute could get a bad response. Ah yes, very sorry, Doctor, I know, important meeting, but there's been a slipped sling at the bow of the *James Caird*, it's a bit of a tub. Not that the doctor's boat wasn't a barge itself, but no matter, the balm of charter, all would be well. Everyone who wanted to be out the door without stress could do it. It was true there were people who needed a fight a day to satisfy some awful itch, but Vlade made them find it elsewhere.

Su was happy to see him, as Mac had gotten a call for her water taxi and wanted to take the job. This altered the drop sequence, and it took some hunting to find an alternative that balanced Mac's need with Antonio's standing request to be out at 5:15 a.m. Small things made Su nervous, he was a careful guy.

Then Inspector Gen showed up. Very senior NYPD, and a famous defender of downtown when uptown. She usually walked the skybridges to the police station on Twentietth, and the day before she hadn't seemed to know who he was. They had never talked, but over dinner she had grilled him about the building's security systems. She had known the local co-op he had hired to install the system and in general seemed quick to understand the issues in surveilling a building. No surprise there.

Now they greeted each other and she said, "I wanted to ask you more questions about the two missing men."

Vlade nodded unhappily. "Ralph Mutchopf and Jeff Rosen."

"Right. Did you talk to them much?"

"A little. They sounded like New Yorkers. Always pounding their pads when I was up there. Hardworking."

"Hardworking but living in a hotelo?"

"I never heard what that was about."

"So you were never told anything about them by anyone on the board?" Vlade shrugged. "My job is to keep the building running. The people aren't my worry. Or so I am led to understand by Charlotte."

"Okay. But let me know if you hear anything about these guys."

"I will."

The inspector left. Vlade felt a little relief as he watched her walk away. Tall black woman, as tall as he was, rather massive, with a sharp look and a reserved manner; and now he had the oddity of his failed security cameras to account for. He definitely needed the security company that had installed the system to come over and check it out. Like with a lot of things, he needed tech support when he got far enough in. Being superintendent of a building definitely meant having to superintend. His crew numbered ninety-eight. Surely she would understand that. Must be the same for her.

He walked on the boardwalk that led out the tall boathouse door to the Met's narrow dock on the bacino, still in the morning shade of the building. There the sight of a little hand reaching up over the edge of the dock to snag some of the stale bread he left out there did not surprise him.

"Hey, water rats! Quit taking the ducks' bread!"

Two boys he often saw hanging around the bacino peered over the edge of the dock. They were in their little zodiac, which just fit the gap between pontoons, allowing them to hide it under the dock's decking.

"What kind of trouble you boys in today?" He had come to the conclusion that they lived in their boat. Many water rats did, young and old.

"Hi Mr. Vlade, we're not in any trouble today," the shorter one called up through the slats of the dock.

"Not yet," the other one added. A comic duo.

"So come up here and tell me what you want," Vlade said, still distracted by the policewoman. "I know you want something."

They pulled their boat out from under the dock and climbed from it onto the planks, grinning nervously. The shorter one said, "We were wondering if you know when Amelia Black is going to get back here."

"I think soon," Vlade said. "She's out filming one of her cloud shows."

"We know. Can we look at her show on your screen, Mr. Vlade? We heard she saw grizzly bears."

"You just want to see her naked but," Vlade pointed out.

"Doesn't everybody?"

Vlade nodded. It did seem to be an important aspect of the popularity of her show. "Not now, boys. I've got work to do here. You can check her out later. Off with you." He looked around his office, saw a box of pasta salad he had brought back from the kitchen and never gotten to. "Hey, take this and feed it to the water rats."

"I thought we were the water rats!" the taller one said.

"That's what he meant," the shorter one said, snatching the box from Vlade before he might change his mind. "Thanks, mister."

"All right, get out of here."

New York is in a constant state of mutation. If a city conceivably may be compared to a liquid, it may be reasonably said that New York is fluid: it flows.

observed Carl Van Vechten

Heaters were put in the steeply sloping roof of the Chrysler Building to stop ice from forming on it and sliding off onto Lexington Avenue with bad results, but after the Second Pulse people forgot this system existed. And then.

e) a citizen

New York, New York, it's a hell of a bay. Henry Hudson sailed by and ^{saw} a break in the coast between two hills, right at the deepest part of the bight they were exploring. A bight is an indentation in a coastline too broad and open to be called a bay, such that you could sail out of it on a single tack. If you don't care about such an antiquarian sailor's fact, bight me. Sail ahead a page or two to resume voyeuring the sordidities of the puny primates crawling or paddling around this great bay. If you're okay pondering the big picture, the ground truth, read on.

The Bight of New York forms an almost ninety-degree angle where the north-southish Jersey Shore meets the east-westish Long Island, and right there at the bend there's a gap. It's only a mile wide, and yet once through it, hopefully coming in on a rising tide, as it's much easier that way, like Hudson you will come into a humongous harbor, unlike anything you've ever seen before. People call it a river but it's more than a river, it's a fjord or a fyard if you want to be geologically prissy about it. It was one dripline coming off the world-topping ice cap of the Ice Age, which was such a monster that the entirety of Long Island is just one of its moraines. When the great ice monster melted ten thousand years ago, sea level rose about three hundred feet. The Atlantic came up and filled all the valleys of the eastern seaboard, as can be easily discerned on any map, and in that process the ocean sloshed into the Hudson, as well as into the valley between New England and the Long Island moraine, creating Long Island Sound, then the East River and all the rest of the vast complicated mess of marshes, creeks, and tidal races that is our bay in question.

In this great estuary there are some remnant ridges of hard old rock, skinny low long lines of hills, now peninsulas in the general flood. One runs south down the western side of the bay, dividing the Hudson from the Meadowlands: that's the Palisades and Hoboken, pointing to the

big lump that is Staten Island. One anchors the moraine of Long Island, angling in from the east: Brooklyn Heights. And the third runs south down the middle of the bay, and because of a swamp cutting across its northern end, it's technically an island: rocky, hilly, forested, meadowed, ponded: that's Manhattan.

Forest? Okay, now it's a forest of skyscrapers. A city, and such a city that it used to take some looking to see it as an estuary. Since the floods that's become easier, because although it was a drowned coastline before, it is now more drownered than ever. Fifty-foot-higher sea level means a much bigger bay, more tidally confused, Hell Gate more hellish, the Harlem River a wild tidal race and not a shipping canal, the Meadowlands a shallow sea, Brooklyn and Queens and the south Bronx all shallow seas, their prismatically oily waters sloshing poisonously back and forth on the tides. Yes, a total mess of a bay, still junked up by bridges and pipelines and rusting sclerotic infrastructural junk of all kinds. And so the animals have come back, the fish, the fowl, the oysters, quite a few of them two-headed and fatal to ingest, but back. People too are back, of course, having never left, still everywhere, they're like cockroaches you can't get rid of them. And yet all the other animals don't care; they swim around living their lives, they scavenge and predate and browse and get by and avoid people, just like any other New Yorker.

So it's still New York. People can't give up on it. It's what economists used to call the tyranny of sunk costs: once you've put so much time and money into a project, it gets hard to just eat your losses and walk. You are forced by the structure of the situation to throw good money after bad, grow obsessed, double down, escalate your commitment, and become a mad gibbering apartment dweller, unable to imagine leaving. You persevere unto death, a monomaniacal New Yorker to the end.

Under all the human crap, the island too perseveres. Initially it was known for its hills and ponds, but they chopped down the hills and filled in the ponds with the dirt from the chopped hills to make the flattest real estate they could, hoping also to improve traffic, not that that did any good, but whatever, all gone now, pretty much flat, although the floods of the twenty-first century revealed a salient fact that wasn't very important before: lower Manhattan is indeed much lower than upper Manhattan, like by about fifty vertical feet on average. And that has made all the difference.

The floods inundated New York harbor and every other coastal city around the world, mainly in two big surges that showed the ocean up fifty feet, and in that flooding lower Manhattan went under, and upper Manhattan did not. Incredible that this could happen! So much ice off Antarctica and Greenland! Could there be that much ice, to make that much water? Yes, there could.

And so the First Pulse and Second Pulse, each a complete psychodrama decade, a meltdown in history, a breakdown in society, a refugee nightmare, an eco-catastrophe, the planet gone collectively nuts. The Anthropocide, the Hydrocatastrophe, the Georevolution. Also great new options for investment and, oh dear, the necessity of police state crowd control as expressed in draconian new laws and ad hoc practices, what some called the Egyptification of the world, but we won't go there now, that's pessimistic boo-hoing and giving-upness, more suitable for the melodramas describing individual fates in the watery decades than this grandly sweeping overview.

Back to the island itself, locus omphalos of our mutual mania: the southern half, from about Fortieth Street right down to the Battery, was all drowned all the time, up to the second or third floor of every building that did not quickly collapse or melt into the drink. North of Forty-second much of the west side stood well higher than the fifty-foot rise in ocean. On the east side, water covered the big flats of Harlem and the Bronx, and it also flooded the big dip at 125th Street, which people actually took the trouble of filling in with landfill, as it was too inconvenient to have the northern end of the island cut off, especially as the Cloisters and Inwood Hill Park were revealed to be the highest ground around, as high as anywhere in the greater harbor region. You had to look to the Palisades or Staten Island or Brooklyn Heights to see anything as high as the very northern tip of Manhattan. And since this long strip forming the northern half of the island remained well above the flood, naturally people from the submerged neighborhoods took refuge on it, went crazy for it. It became like downtown in the nineteenth century, or midtown in the twentieth. The Cloister cluster, capital of the twenty-second century! Or so they liked to imagine up there. The constant northward drift suggests that in another century or two all the action will remove to Yonkers or Westchester County, so buy land up there now, although sue this commentator for slan-

der if he says no fucking way. But people have said that before. For now, the north end of Manhattan is the capital of capital, the proving ground for the new composite building materials for skyscrapers, materials invented for not-yet-happening space elevator cables but in the meantime great for three-hundred-story superscrapers, needing far up into the clouds, such that when you are in their uppermost floors, on one of the nosebleed terraces trying to conquer your altitude sickness and looking south, downtown looks like a kid's train set left behind in a flooded basement. You could bar the moon out of the sky from those terraces.

And so New York keeps on happening. The skyscrapers, the people, the what-have-yous. The new Jerusalem, in both its English and Jewish manifestations, the two ethnic dreams weirdly collapsing together and in the vibration of their interference pattern creating the city on the hill, the city on the island, the new Rome, the capital of the twentieth century, the capital of the world, the capital of capital, the unchallenged center of the planet, the diamond iceberg between rivers, the busiest, noisiest, fastest-growing, most advanced, most cosmopolitan, coolest, most desirable, most photogenic of cities, the sun at the center of all the wealth in the universe, the center of the universe, the spot where the Big Bang occurred.

The capital of hype too, ya think? Madison Avenue will sell you anything, including that totally bogus list above! And so, yes, the capital of bullshit, and the capital of horseshit, also the capital of chickenshit, weaseling along pretending to be something special without changing anything in the world and ultimately grinding along just like any other ridiculous money-crazed megalopolis on the planet, especially those located on coasts, formerly great trading centers and now completely fucked. But *tonjours gai*, *arthy*, *tonjours gai*, and like most of the other coastal cities it's limped along as best it could. People keep living here, bad as it is, and more than that, people keep coming here, despite the suicidal stupidity of that, the way it is in effect volunteering for hell. People are like lemmings, they are mammals with herd instincts very much like the instincts of cows. In short, morons.

So it isn't all that special, this NOO YAWK of ours. And yet. And yet and yet and yet. Maybe there's something to it. Hard to believe, hard to admit, pain-in-the-ass place that it is, bunch of arrogant fuckheads, no reason for it to be anything special, a coincidence, just the luck of the

landscape, the bay and the bight, the luck of the draw, space and time congealing to a history, to have come into being in its moment, accidentally growing the head, guts, and tumescent genitals of the American dream, the magnet for desperate dreamers, the place made of people from everywhere else, the city of immigrants, the people made of other people, very rude people, loudmouthed obnoxious assholes, often, but more often just oblivious and doing their own thing with no regard for you or yours, many strangers banging into each other, dodging each other, yelling at each other sometimes but really mostly just ignoring each other, almost polite you might say, using the city-sharpened skill of looking past or through people, of not seeing the other, the crowds just background tapstries for you to play your life against, lurid backdrops providing a fake sense of drama to help you imagine you're doing more than you would be if you were in some sleepy village or Denver or really anywhere else. New York, the great stage set—well, there may be something to it.

Anyway there it lies filling the great bay, no matter what you think or believe about it, spiking out of the water like a long bed of poisonous sea urchins onto which dreamers cling, as to an inconveniently prickly life raft, their only refuge on the vast and windy deep, gasping like Aquaman in a seemingly-impossible-to-survive superhero's fake low point, still dreaming their fever dreams of glorious success. If you can make it here, you'll make it anywhere—maybe even Denver!

In 1924, Hubert Faunteroy Julian, "the Black Eagle," the first Negro to obtain a pilot's license, parachuted onto Harlem wearing a devil's costume and playing the saxophone. Later he flew to Europe and challenged Hermann Goering to an air duel.

A pygmy named Ora Benga was exhibited for a month in the primate house of the Bronx Zoo. 1906.

Typically American, we had no ideology.

—Abbie Hoffman

f) Amelia

One of Amelia Black's favorite flyways ran from Montana east over the Missouri River and south toward the Ozarks, then east into Kentucky and through the Delaware Gap and across the pine barrens, briefly out to sea and up to New York. For this entire distance her airship, the *Assisted Migration*, flew over wildlife habitat and sky ag corridors, and if she kept to a low enough altitude, which she did, there were hardly any signs of people, just a tower here or there, or a cluster of lights on the horizon at night. Of course there were many other skycraft in the sky, from personal airships like hers to freight dirigibles to spinning skyvillages, and everything in between. The skies could seem crowded, but below her North America stretched out looking as empty of people as it had been fifty thousand years ago.

That wasn't even remotely true, and when she reached her destination she would be reminded of the real state of affairs in a big way, but for the four days of her voyage, the continent looked like wilderness. Amelia's cloud show was about assisting the migration of endangered species to ecozones where they were more likely to survive the changed climate, so the sight of all the nearly unoccupied land passing below, for hour after hour, was fairly common for her, but nevertheless always encouraging to see. She and her cloud audience could not but realize that there were indeed habitat corridors, well established, and in them wild animals could live, eat, reproduce, and move in whatever directions the climate pushed them. They could migrate to survive. And some of them were even lucky enough to catch a lift in the right direction on the *Assisted Migration*.

This trip had started over the Greater Yellowstone Ecosystem, one of her favorites. Her ultrazoom cameras showed her audience herds of elk chased by packs of wolves, and a mother grizzly and cub she had featured before, Mabel and Elma. Then came the high plains, mostly abandoned

by people even before the habitat corridors had been established, now occupied mainly by vast herds of buffalo and wild horses. Then the convoluted ridges of the northern Ozarks, green and gnarly, followed by the wide braided floodplains of the Mississippi River, dense with flocks of birds. Here she had hovered to catch images of a skyvillage swooping down onto an immense apple orchard and harvesting it from above, deploying scoops and nets and carrying off a crop of apples without ever touching down. Then the rolling hills of Kentucky, where North America's great eastern hardwood forest covered the world with an endless carpet of leaves.

Here, as she headed toward the Delaware Gap, she dropped the *Assisted Migration* low enough to take a closer look at the top of the canopy, an unbroken billowy spread of oaks, walnuts, and elms. Five hundred feet was the champion height from which to view landscapes, and even more so if an attractive woman was lowered from the airship's gondola on a long line, after which she could swing back and forth like a Gibson girl under a tree, although in this case over the tree. Today a red sleeveless dress; there would of course be viewers hoping she might get enthusiastic and take the dress off and throw it fluttering down into the trees, where it would match some of the autumn's turning leaves. She was not going to do that, she had retired from that part of her career, as she kept telling her producer Nicole. But the dress would make her exceptionally visible. And if it blew up around her waist from time to time, well, these things happened.

Swinging over the world from below her airship was one of Amelia's signature moves. Now she did it again, leaving the *Assisted Migration* in the hands of her very capable autopilot, Frans. Back and forth on the swing's seat, pulling hard on the ropes, until she was swooping like a pendulum weight over the endless rolling quilt of autumn leaves, glorying in the rush and beauty of the visible world.

But then Frans spoke up through her earbud to report that the motor necessary to reel her line back up into the gondola had failed again, something it was prone to do when the line was at full extension. She was stuck down there at the end of the line, oh no!

This had happened before. Amelia's producers had assured her the motor was fixed, and yet here she was again, hanging two hundred feet below the airship, and just above the trees. Getting cold in the wind, actually. Could not just stay hanging in the air all the way to New York. A problem!

But Amelia was used to these kinds of situations; she wasn't called Amelia Erhard for nothing; and she was in good contact with Frans. The wind was mild, and after some thought and discussion, Frans lowered the airship until Amelia could kick around in the uppermost leaves and twigs of the forest canopy, find one of the highest branches of an elm, and stand on it. Yay! There she rested like a dryad, thigh deep in foliage, looking up at the *Assisted Migration* and her various camera drones with a plucky smile.

"Now watch this, people," Amelia said. "I think Frans and I have figured out a solution to this one. Oh look, there's a squirrel! It's either a red squirrel or a gray squirrel. They're not as easy to tell apart as the names would lead you to believe."

Frans kept lowering the airship toward her, the swing's rope coiling down past her into the forest, until the craft filled her sky, and its gondola almost knocked her on the head. She ducked, and talked it over with Frans in a somewhat urgent back-and-forth; then the open bay door of the gondola dropped slowly beside her, smooching down into leaves until she was able to grab its doorway and pull herself into the bay. After that she undid her harness and hauled in the swing line by hand, pulling hard a few times to unsnag it from branches below. When it was all inside she told Frans to shut the door and rise, while she hustled back upstairs to get some hot chocolate into her.

Her audience had liked it, feedback indicated, although as usual there were sad viewers complaining that she had stayed dressed, prominent among them her producer Nicole, who warned her it was going to lose her viewers. Amelia ignored them all, Nicole in particular. On they flew. Over the scrubby pine barrens, then the green and empty New Jersey shore, which had been a drowned coastline even before the floods; then out over the blue Atlantic.

Thus, as she reminded her audience, they had flown over one corridor in the great system of corridors that now shared the continent with its cities and farms, and the interstate highways and the railways and power lines. Overlapping worlds, a stack of overlays, an accidental megastucture, a postcarbon landscape, each of the many networks performing its function in the great dance, and the habitat corridors providing a life space for their horizontal brothers and sisters, as Amelia called them on her broadcasts. All creatures made good use of these corridors, which if not

pure wilderness were at least wilderness, and it was easy to wax enthusiastic about their success while flying over them at five hundred feet. Critics of her program, and of assisted migration more generally, never tired of pointing out that she was just one more charismatic megafauna, like her favorite subjects, flying over the essential groundwork of lichen and fungi and bacteria and the BLM, all the complicated work of photosynthesis and eminent domain, where things were ever so much more complicated than she ever deigned to notice. Well, she had done her share of that work too, as anyone could find out by looking into her past; and now it was her time to fly.

Frans took the airship well out over the Atlantic, then turned left and flew north toward New York. At the intersection of New Jersey and Long Island the tiny gray stitch that was the Verrazano Narrows Bridge appeared, and north of that the great city quickly came into view in all its watery magnificence, visible as a patchwork under a light marine layer of white clouds. New York harbor was a very human space, no doubt about it, even though it too was an ecozone, the amazing Mannahatta Eco-system. But the human element dominated it. Awesome; sublime; even refreshing, after the monotony of the eastern hardwood forest and the high plains. From her vantage the great harbor looked like a model of itself, a riot of tiny buildings and bridges, an intricate assemblage of gray forms. Lower Manhattan was water-floored, and just one small part of the big bay, but so densely studded with skyscrapers and bordered with docks that the old outline of the island was easy to see. Upper Manhattan remained above water and had become more crowded with buildings than ever, including many new superscrapers, the colorful shapely graphenated towers north of Central Park that thrust far higher into the sky than those in downtown and midtown ever had. This had the effect of making lower Manhattan look more sunk than it really was.

Amelia narrated the sights to her audience with the astonishment common to all Manhattan tour guides. "See how Hoboken's been built up? That's quite a wall of superscrapers! They look like a spur of the Palisades that never got ground down in the Ice Age. Too bad about the Meadowlands, it was a great salt marsh, although now it makes a nice extension of the bay, doesn't it? The Hudson is really a glacial trench filled with seawater. It's not just an ordinary riverbed. The mighty Hudson, yikes! This

is one of the greatest wildlife sanctuaries on Earth, people. It's another case of overlapping communities." She swung the camera around to the east. "Brooklyn and Queens make a very strange-looking bay. To me it looks like some kind of rectangular coral reef exposed at low tide."

Frans was bringing the *Assisted Migration* down over what remained of Governors Island, so she said, "The little piece of Governors Island still above water is the original island. The underwater part was landfill, made with the dirt they excavated when they dug the Lexington Avenue subway." Nicole sent a text saying it was time to wrap, so Amelia said, "Okay, folks, it's been great having you along, thanks all of you for traveling with me." Her cloud numbers had been strong, averaging thirty-two million viewers for the duration of her trip, half of them international. This made her one of the biggest cloud stars of all, and among those focused on nature, absolutely the black swan megastar. "I hope you come back and join me again. For now, here we are coming in over the Twenty-third Street canal. I never know what to call them. They're very particular in lower Manhattan about not calling anything a street anymore. It marks you as coming from out of town. But I am from out of town, so whatever."

Frans floated them past the downtown skyscrapers and turned east toward the old Met Life tower. Already she could see the little gilded pyramid of its cupola, rising above Madison Square. There were any number of taller buildings around the bay, but it still dominated its immediate neighborhood.

Amelia called in to confirm her arrival. "Vlade, I'm coming in from the west, are you ready for me?"

"Always," Vlade replied after a short pause.

Winds sometimes got fluky over Manhattan, but today she headed into a steady east wind of about ten knots. Looked like high tide in the city, water reaching up the big avenue canals almost to Central Park; at low tide the waterline would be down near the Empire State Building, now looming to her left. She had considered living there, its blimp mast being so much higher, but the old tower had become fashionable, and even though Amelia was one of the most famous of the cloud stars, she couldn't afford it. Besides, she liked the Met Life tower better.

Frans and the mast took over, the airship's turbines hummed, her gondola yawed and tilted, the hiss of expelled helium and air joined the various

whooshes of wind and the general hum of the city, a susurrus of thousands of wakes bouncing off buildings, also boat motors, horns, the usual urban clatter. Ah yes: New York! Skyscrapers and everything! Amelia had been born and raised in Grant's Pass, Oregon, and because of that she loved New York passionately, more than any of the natives ever knew enough to feel. The real locals were like fish in water, unaware and unimpressed.

The *Assisted Migration*'s hook latched onto the mast and the airship swung a little, and soon the tube of the Met's walkway leached up to her from under the eaves of the cupola and seized her gondola's starboard door. The inner door opened and with a quick whoosh the air equalized, and she grabbed her bag and descended the inflatable stairs into the top of the building, took the spiral stairs and then the elevator down to her apartment on the fortieth floor, looking south and east. Home sweet home!

Amelia had a teeny kitchen nook in her closet of an apartment, but like most residents of the Met she ate her dinners in the dining hall downstairs. So after showering she went down to eat. As always the dining hall and common room were jammed, hundreds of people in the serving lines and crowded side by side at long tables, talking and eating. It reminded Amelia of tadpoles in a pond. Quite a few of them waved hello to her and then left her alone, which was just how she liked it.

Vlade was at his table by the window overlooking the bacino, sitting with a woman Amelia didn't know.

Amelia approached, and Vlade introduced them: "Forty-twenty, this is Twenty-forty. Ha. Amelia Black, Inspector Gen Octaviasdottir."

"Nice to meet you," Amelia said as they shook hands. The policeman said she had seen Amelia's show. "Thanks," Amelia said. "Appreciate you watching. When did you move into the building?"

"Six years ago," Gen said. "I moved in with my mom to help when she got sick. Then when she died I stayed."

"Oh, I'm sorry."

Gen shrugged. "I'm finding out it's not that unusual here."

The cooks rang the bell for last call, and Amelia stood to go see what was still there. "That bell has become totally Pavlovian for me," she said. "It rings and I'm starving."

She came back with a plate of salad and the dregs from several nearby

empty bowls. As she dug in, Vlade and Gen talked about people Amelia didn't know. Somebody had gone missing, it sounded like. When she was done eating she checked her wristpad for cloudmail and laughed.

"What's up?" Vlade said.

"Well, I thought I was going to be here for a while," Amelia said, "but this sounds too good to pass on. I've been asked to assist another migration."

"Like what you always do?"

"This time it's polar bears."

"High profile," Gen noted.

"Where can you move them?" Vlade asked. "The moon?"

"It's true they can't go any farther north. So they want to move them to Antarctica."

"But I thought that was melted too."

"Not completely. They'll probably be okay there, but I don't know. You can't just move a top predator, they have to have something to eat. Let me ask."

She tapped her pad for her producer, and Nicole picked up immediately.

"Amelia, I was hoping you'd call! What do you think?"

"I think it's crazy," Amelia said. "What would they eat down there?"

"Weddell seals, mainly. We've done the analysis, there's lots of biomass. There aren't as many orcas as there used to be, so there's more seals. Another top predator might help keep them in balance. Meanwhile we're down to about two hundred wild polar bears around the whole Arctic, and people are freaking out. They're about to go extinct in the wild."

"So how many are you talking about moving?"

"About twenty to start. If you agree to this, you'll take six of them. Your people will love it."

"The defenders will hate it."

"I know, but we plan to film you and release to the cloud later, and we'll keep the bears' location in Antarctica a secret."

"Even so, they'll harass me for years to come."

"But they do that already, right?"

"True. All right, I'll think it over."

Amelia ended the call and looked up at Vlade and the policewoman. She couldn't help smiling.

"The defenders?" Vlade asked.

"Defenders of the Earth. They don't like assisted migration."

"Things are supposed to stay in place and die?"

"I guess. They want native species in native habitats. It's a good idea. But, you know?"

"Extinction."

"Right. So to me, you save what you can and sort it out later. But not everyone agrees. In fact, I get a lot of hate mail."

The other two nodded.

"No one agrees with anything," Vlade said darkly.

"Polar bears," Inspector Gen said. "I thought they were gone already."

"Two hundred is like being gone. They'll join the zoo-only crowd pretty soon, sounds like. If the zoos can keep them alive to a cooler time, it will be quite a genetic bottleneck. But, you know. Better than the alternative."

"So you'll do it?"

"Oh yeah. I mean, talk about your charismatic megafaunal Yikes."

"Your specialty," Vlade noted.

"Well, I like everything. Everything but leeches and mosquitoes. Remember that time the leeches got me? That was gross. But the shows that get the biggest ratings definitely feature the biggest mammals."

"And they're in the worst trouble, right?"

"Right. Definitely. Sort of. Although, really—" She sighed. "Everything's in trouble."

The outdoors is what you must pass through in order to get from your apartment into a taxicab.

said Fran Lebowitz

8) Charlotte

Charlotte Armstrong's alarm went off and she jabbed her wristpad. Time to go home. Unbelievable how fast time went when you needed more of it. She had spent the afternoon trying to sort out the case of a family that claimed to have walked from Pennsylvania into New York by way of New Jersey; they told their story ignoring the various impossibilities in it, insisting they had done it without actually being able to explain how they had finessed the checkpoints and marshes, bandits and wolves—no, they had not seen any of those, they had walked by night, walked on water maybe, until lo and behold they were on Staten Island and getting picked up by a beat cop who asked for their papers. And they had none.

She had sat with them in the holding tank at Immigration all afternoon. They were scared. They truly did not seem to know where or how they had crossed in, although that was absurd; and yet people were absurd, so who knew. Could be they had just kept moving, night after night, one step at a time, like blind people. But they had one cheap wristpad between them, so probably their actual course could be reconstructed from that, as she had suggested to them. But the case was not so serious that the immigration authorities had yet subpoenaed their wrist. Privacy laws fought almost always ruled. In reality every case was a test. She had explained all that to them and they had stared at her. For them to have any chance, she was going to have to be their representative in the court system. That was how it worked, most of the time. She had seen it a thousand times; this was her job. Formerly a city job, now some kind of public/private hybrid, a city agency or an NGO or something, there to help the renters, the paperless, the homeless, the water rats, the dispossessed. Calling it the Householders' Union had been aspirational at best.

Just as she was finishing with them and packing to go home, the mayor's

assistant, Tanganyika John, came in to ask if Charlotte could come over and help the mayor deal with an issue, great in importance yet vague in detail. Charlotte was suspicious of this, as she was of John, a supercilious woman, slender and fashionable, whose only job was assisting the mayor, meaning she was one of the defensive ramparts that the mayor erected around herself as a matter of course. The mayor had several people on her staff doing similar stuff, useful only to her reputation, while the city gasped and heaved for life under her. But oh well! The tradition of an imperial mayor was very old in New York.

Charlotte agreed with as much politeness as she could muster and followed John down the hall and up the elevator to the mayor's administrative palace on the penthouse floor. There three assistants just like John asked Charlotte to help the mayor write up a press release explaining why they had to impose immigration quotas for the good of the people already living in the city.

Charlotte immediately refused. "You'd be breaking federal law anyway," she said. "They're very jealous of their right to establish these laws. And my job is to represent the very people you're trying to keep out."

Oh no, not really, they were explaining mendaciously, when the mayor herself breezed in to make the same request. Galina Estaban, beautiful in appearance, smooth in manner, arrogant in attitude, stupid in action. Charlotte was coming to believe that arrogance was a quality not just correlated with but a manifestation of stupidity, a result of stupidity. In any case here Galina stood, vivid in the flesh, making the same request as if because it came from her Charlotte could not refuse, even though they had been enemies for almost ten years now. Galina seemed to think *fememy* was a real thing and not just hypocrisy; then again since she was a hypocrite, maybe that made the term real for her. In any case Charlotte quickly disabused her of the notion that a personal request carried any weight. Galina responded with something about defending the borders of the great city they both loved, et cetera.

"Defending the borders isn't possible when there are no borders," Charlotte said.

Galina frowned, even pouted. Well, it had gotten her to the mayor's office, this pouty cuteness in the face of resistance. Charlotte met it with a stony glare. Through the pretended amusement and tolerance that fol-

lowed, Charlotte saw the glint in the eye that indicated this was yet another little jab in their long battle, a parry-riposte that would be added to all the rest. It was Galina who had dumped city immigrant services over the side. Public/private combine, worst of both worlds!

"We have to get a handle on this issue somehow," Galina said, turning dark on a dime. "Pack people in too tight and there could be an explosion."

"This is New York," Charlotte said. "It's a city of immigrants. You don't get to pick how many."

"We can influence the number," Galina said.

"Only by being a thug and breaking the law."

"Explaining why we need quotas is not being a thug."

Charlotte shrugged and excused herself. "Don't waste time on this," she suggested as she left.

She stumped home on the skybridges, looking down at the busy canals. She had started walking to and from work after her excursion with Inspector Gen. Every day now she found irregular high lines of her own devise. The original High Line was underwater and in its third life as an oyster bed. The current array of skybridges ranged from boardwalks just above high tide to long carwalks at the fortieth and fiftieth floors. They were almost all clear plastic tubes, reinforced by graphenated composite meshes so light and strong that they could span four or five blocks. Before her walk with Inspector Gen, she had almost always taken the number four vaporetto to work and back, but the canals could be so jammed that often as she watched from a vapo she could see walkers on the boardwalks moving quite a bit faster than her. And presumably it would be better for her health, at least if her feet could handle it. Have to work up to a daily walk both ways; not sure if that would work, but trying it made her pay attention to herself in new ways. Skip that dessert and you don't have to carry it home from work, thus you will hurt less! Pain as a spur to action: oh yes, certainly not the first time for that.

She got home just in time to change and eat a bite in the dining room before the weekly executive board meeting. Bit of a busman's holiday, this board. From city to building: the difference in scale made for somewhat different problems, but not that different. Well, she had volunteered for the board at a time when they were being sued and needed help. And even

though it resembled her day job, it was interesting. As was her job, most of the time. She just needed some blood sugar and it would all be fine.

Actually a bit difficult to get that, as the food trays were almost empty when she got there. She had to scrounge scraps from the corners of trays and the bottoms of bowls, might as well just put her face in the salad bowl and slurp like a dog, as those two boys ahead of her in line were doing. Damn, they were licking the bowls clean! Best be on time to dinner, as everyone knew; a long line formed in the half hour before opening. Residents were always present and accounted for when it came time for the important stuff, meaning no one would be at the executive board meeting. They really should try to whittle their population down to full capacity, she had made mistakes in that regard. A tendency to take people in was a professional habit but a mistake when performed out of context. Too many mouths to feed, dining hall jammed, very loud, people sitting on the floor against the walls with trays on their laps, glasses on the floor beside them. She did that herself, getting down awkwardly, wearily, knowing it was going to be tough to stand back up. One reason she wore pants in the evenings.

Then up to the thirtieth floor, where they kept a room from which to run the building. She was only a little late, which would have been fine if she weren't the chair again. The others were sitting around talking about the two missing men. She sat and they all looked at her.

"What?" she said.

"We're thinking that we shouldn't let anyone live on the farm floors anymore," Dana told her. The others were looking at her as if she was going to object, probably because she had argued to let the two men live there.

"Because?" she said, mostly to play to their expectations.

"There isn't the security on the farm that there is in a room, as we saw," said Mariolino. He was board secretary this year.

Charlotte shrugged. "I have no problem with putting the farm out-of-bounds. It was just a stopgap measure."

The others were relieved to hear her say this. There were five of them there now that Alexandra had arrived, and they ran down the items listed on the schedule. Complaint about noise, priority in the boathouse, desire for a bigger freight elevator (Vlade rolling his eyes at this, mentioning size of elevator shaft, wondering if a taller elevator car would satisfy the com-

plainer), dispute over the dues/work credit formula as applied to someone who thought cleaning the hallway on their floor was work deserving of a work credit. Relations with the LMMAS, pronounced "lemmas" or "lame ass," depending on mood, the Lower Manhattan Mutual Aid Society, which was the biggest of many downtown cooperative ventures and associations, a kind of umbrella for all the rest of the organizations in the drowned zone. Exchange rates between the dollar and the Lame Ass blocknecklace currency were so divergent between official and unofficial rates that LMMAS had proposed they do away with the official rate and just let it float. Had to try to keep the wet currency as strong as possible, if it was to succeed at all. And they needed it. So: currency policy. Just another building issue.

On it went like that, as they ran their little city-state. Apartment 428 was empty because of the death of Margaret Baker, no heirs who wanted to move in, they lived in Denver and wanted to sell. Marge's contract with the co-op was rock solid, Charlotte knew this because she had helped write it, and so the Denver family was going to have to sell to the co-op for one hundred percent of Marge's buy-in. Very fair. The co-op had a reserve fund dedicated to reacquisitions, so it seemed like it would be okay.

But then Dana said, "If we bought it from them and then rented it to nonmembers, we could make the buyout price in about ten months and then go on raking it in from there."

"Ten months?" Charlotte asked.

Alexandra and the others nodded. Rents in lower Manhattan were shooting up. People were enjoying the SuperVenice, and that was causing housing prices to rise. Intertidal aeration, they said it was called.

"Aeration," Charlotte said in the way Vlade would say *mildew*. "Don't they just mean inflation, or speculation? I thought the Second Pulse had spared us all that."

Not forever, she was told. Canal life was looking exciting. Hassles of daily life not evident to tourists, or to people so rich they could buy their way out of the hassles.

"One of the rich people who wants to buy in here is Amelia Black," Vlade mentioned. "Her room and a parking share on the blimp mast. She said it would be a bit of a stretch for her, which surprised me, but she said she wanted a place in New York, and she likes it here."

"Would she work the co-op?" Charlotte asked, feeling skeptical. "Isn't she away a lot?"

"She said she would work the co-op. I'm sure she'd pitch in, she's that kind of person."

"But wouldn't she be away a lot?"

"Sure, that's her job. But if we have a member who works the co-op when they're here, being away a lot is not the worst thing, from my point of view. Less stress on the building, less water-power-sewage. More food left for others."

Charlotte nodded. Vlade thought the building's thoughts, and she valued that. "The membership board can work that out with her," she said.

"Membership sent her to us with a yes recommendation."

"Okay then. Let her buy in, if they say so."

"I'll tell her," Vlade said.

"Where is she now?"

"The Arctic. She's going to fly some polar bears to the South Pole."

"Really?"

"That's what she told me."

"I don't know about this one. She sounds like trouble to me. But the membership committee has spoken."

They moved on to other business, running down the schedule as fast as they could. All of them had been on the board long enough not to want to prolong a meeting. Vlade wanted his cathodic protection systems replaced on every steel beam in the building, and a new sewage processor to better capture and process their shit into fertilizer for the farm's soil, and more say on the bacino's aquaculture board. He also wanted an upgrade in their electrical connection to the local power substation. The building's photovoltaic paint generated most of the electricity they needed, but there was a lot of back-and-forth electrically between them and the substation, and an upgrade would help. These were the main items on his wish list, he said in conclusion.

The last item on the schedule had been added by Dana at the last minute, he said: there was an offer to buy the building.

"What?" Charlotte said, startled. "Who?"

"We don't know. They're going through Morningside Realty and prefer to remain anonymous."

"But why?" Charlotte exclaimed.

"They don't say." Dana looked down at his notes. "Emmerich guessed it's a company from the Cloister cluster, but that may just be because Morningside has its offices up there. They're offering us about twice what the building was last assessed at. Four billion dollars. If we took it, we'd all be rich."

"Fuck that," Charlotte said.

Silence in the room.

"We probably have to bring it to a vote," Mariolino said.

Vlade was scowling. "You have to?"

"Let's research it first," Charlotte said.

They got up and briefly mingled near the window, mulling things over. Coffee for some, wine for others. Charlotte poured a stiff Irish coffee for herself, wanting both stimulation and sedation. It didn't work, in fact it backfired, making her antsy but confused. An anti-Irish coffee, must be an English coffee. "I'm going to go to bed," she said grumpily.

When she got to her room, which was actually just a bed and desk in one of the dorm rooms, separated from the rest of her roommates by soundquills, she found a message from Gen Octaviasdotir on her screen. She tapped and Gen picked up.

"Hi, it's Charlotte. What's up?"

"Getting back to you about those missing persons in the building."

"Find anything?"

"Not much, but there are some things I can tell you about."

"Breakfast tomorrow?"

"Sure, let's."

Maybe a mistake to put something else on her calendar and in her head right before bedtime, with an Irish coffee in her no less. It was quite possible her brain would ramp back up and begin a spin cycle on this stuff, jazzing wearily through another night of insomniac pseudo-slumber, in and out until the light of dawn relieved her of the pretense of sleep. But in the event she crashed and slept well.

h) Stefan and Roberto

I love all men who dive.

said Herman Melville

The sun rose under a high ceiling of frilly, pearl-colored clouds. Autumn in New York. Two boys pulled a small inflatable boat from under the dock floating off the Met's North building. The weight of the boat's battery-powered motor depressed it sternward, and the taller of the two boys sat in the bow to counterbalance that. The shorter one handled the tiller and throttle, piloting them through the canals of the city. East into the glare of the sun off the water. Rising tide near its height, the morning air briny with the tang of floating seaweed. They passed the big oyster bed at the Skyline Marina and emerged into the East River, then hugged the shore and headed north, staying out of the lanes of traffic marked by buoys on the water. By nine they had gotten past Turtle Bay and up to Nineteenth and were ready to cross the East River. Stefan looked up—and downstream; nothing big coming either way. Roberto pushed the throttle forward and their little prop, under the stern lifted Stefan a few inches as they surged across the river.

"I wish we had a speedboat, that would be so cool!"

"Meanwhile slow down, I see our bell."

"Good man."

Roberto slowed while Stefan put on a long rubber glove. Leaning over, he reached into the water and grabbed a loop of nylon rope and slipped it off their underwater buoy, which was anchored on the shallows that had once been the south end of Ward Island. He pulled up hard. The other end was tied to an eye at the tip of a large cone of clear plastic that was edged on its open end by a ring of iron, which kept that end pointed down. When he had hauled it near the surface they both pulled it up onto the bow, then sat on the far round sides of the boat, peering into the bell to see if anything had changed. All looked good, and Roberto crawled under the edge of it to stick their new gear to Velcro strips on its inside wall.

"Looking good," he said as he crawled out from under it. "Let's get it to Mr. Hexter's site."

They hummed up the west shores of Hell Gate and then over the shallows of the south Bronx. After a bit of tacking around and drifting, Stefan, consulting the GPS on their salvaged wristpad, announced they were over the spot they wanted. "Yes!" Roberto cried, and tossed one of their improvised underwater buoys overboard: two cinder blocks tied to a stolen nylon rope, the other end of rope tied to a buoy such that it would stay just under the surface even at low tide. X marks the spot. They tied the boat's bowline to the line floating up from the buoy and sat there feeling hopeful. The tide would begin falling soon, but for now the river was still. Time to get to work.

Roberto was their diver, because their drysuit was too small for Stefan to get into. All their gear had been scavenged in variously ambiguous circumstances, so they could not be too particular about anything. When Roberto was all zipped in, gloved and face-masked, they lifted the cone over the side with its open end down, getting it onto the water as flatly as possible, so that as it dropped slowly into the turbid water, they saw that a good amount of air had been trapped under it. The cone was just heavier than the air it had caught, so now it was a diving bell.

Roberto grabbed the end of the air hose and took their flashlight in the other hand, and with a deep breath he slipped over the side of the boat into the water. He swam down and got under the rim of the bell, then rose into the air trapped under the bell. Stefan could just barely make him out. Then he swam under the edge and back up to the surface.

"All good?" Stefan inquired.

"All good. Go ahead and let me down."

"Okay. I'll tug on the air hose three times when the oxygen is running out. You have to come up then. I'll pull the bell up on you if you don't."
"I know."

Roberto dove under the bell again. Stefan let the nylon rope out hand over hand, allowing the bell to gently sink into the river with Roberto under it. They had only tried this a couple of times, and it still felt a little freaky. When the rope went loose Stefan knew the bell was on the bottom, presumably next to or even on the cinder blocks marking their site.

Their wristpad's GPS showed that the boat was still on the right spot. He dialed the knob on their oxygen bottle to low flow, a liter a minute. Pretty soon that air would fill the bell, and he would see bubbles breaking the surface around the boat. The oxygen cylinder was one they had taken from a neighbor of Mr. Hexter's, an old woman who needed to breathe with one all the time and so had a lot of them around in her room. Stefan had clipped together two sets of her air hoses, making thirty feet of tubing, and Roberto was now seventeen feet under the surface, so all was well in that regard.

Stefan couldn't see much of Roberto, and even the bell was just a kind of glow in the dark water, lit by Roberto's flashlight. But Roberto was now standing on an old asphalt surface of what once had been a parking lot, just behind the old riverfront in the south end of the Bronx. With the aid of his light he would be able to see quite well under the bell. Stefan tugged once on the oxygen tube. All good?

A tug came back. All good.

Down there Roberto would be deploying their metal detector, after detaching it from the inner wall of the bell. This detector was a Golfer Maximus, liberated from the effects of another neighbor of Mr. Hexter's, a canal diver who had recently died and appeared to have no family. Roberto would use this detector to scan the ancient submerged asphalt and see if it detected anything under Mr. Hexter's spot.

And indeed, down under the diving bell, Roberto turned on the detector, set it for *gold*, and jumped when the detector immediately started beeping—his head clonked against the side of the diving bell, and he shouted uselessly up to Stefan. He picked up the end of the air hose and shrieked into it. "We found it! We found it! We found it!" His heart was pounding like crazy.

He moved the detector around the perimeter of the bell. The ping-pong was fastest near one edge, he thought it might be north. The beeping got faster rather than louder as the detector was moved closer to its target metal: it started loud in the first place. Roberto's heart rate was accelerating in time with the beeps, and he began to hyperventilate a little, muttering, "Oh my God, oh my God, oh my God." He detached a can of red spray paint they had Velcroed to the inside of the bell and sprayed the wet

asphalt under his feet, watched the paint bubble and spread over the pebbly old asphalt. It might not stick very well, but it might. Some of it should stay there for later.

Time passed for Stefan up in the boat. In the slight breeze he was getting a little cold. One of the great things about this hunt was that the spot they were investigating had been a parking lot built on landfill, which meant that for centuries people would not have thought to look there for a sunken ship, nor, if it had occurred to them, would they have had an easy time looking. Not until the Second Pulse had returned this area to a state of nature, if that was the right way to say it, had it become possible again to hunt for a shipwreck here. Which if found could be dug up in secret, under water all the while and no one the wiser. Marine archaeology was cool that way. And so it was that one of the greatest sunken treasures of all time might possibly be located at last.

But for now it seemed to him that Roberto had been down there a long time. The little oxygen bottle's gauge was showing that it was nearly empty. Stefan tugged on the oxygen tube three times.

Down below, Roberto saw this but ignored it. He put his cold foot on the tube so it wouldn't pull out under the edge of the bell. Then he tugged once: all good.

Stefan tugged back three times, harder than before. Low battery power, low oxygen, and the tide was now ebbing, so that he had to begin running the boat against the slap of the flow, gauging the tension in the bell rope against that of the buoy line and the oxygen line. None of them could get too taut, especially not the oxygen line.

He tugged three times again, harder still. Roberto could be hard to convince even when you were talking to him.

"Damn it, I'm pulling you," Stefan announced loudly down at the bell. Yelled it, really. They had a hand reel screwed to their plywood thwart, and now he looped the bell rope over the reel and began to turn hard on the crank, pulling the bell and therefore Roberto up from the bottom.

Down below Roberto hurried to tack the paint can and metal detector against the inside of the bell before it rose over him. Already the water had rushed under its edge and slapped him up to the knees. Time to take a deep breath and slip under the edge and swim up to the surface, but the tools had to be secured first.

Stefan kept on cranking, knowing this was the only way to get Roberto to give up and surface. When he hit the surface he would start cursing viciously as soon as he could catch his breath, although his voice was too high to make the curses very impressive. Pretty soon Stefan could see the top of the bell, and right after that Roberto burst onto the surface of the water, blowing out air, and then started in, not with curses but with triumphant whoops, "Yes! Yes!" followed by "I found it! We found it! The detector! It went off! We found it!" Then some violent hacking as he swallowed some river water.

"Oh my God!" Quickly Stefan helped him over the rounded side of the boat, then hauled up the bell while Roberto started pulling himself out of the drysuit. "You really did? It went off for gold?"

"It definitely did. It went really fast, really fast. I shouted up the air hose to tell you, couldn't you hear?"

"No. I don't think air hoses transmit voices very far."

Roberto laughed. "I was screaming atcha. It was great. I marked the spot with the spray can. I don't know if that will work, but we've got the buoy there too, and the GPS. Mr. Hexter is going to freak."

Freed of the drysuit, standing in the wind in his wet shorts, he shut his eyes and Stefan sprayed him with a water bottle liberally dosed with bleach, and then Roberto towed off his face. The harbor's water was often nasty and could give you a rash, or worse. When Roberto was dried and dressed, he helped Stefan haul the diving bell onto the bow, and then they cast off from their underwater buoy and began to motor downstream, chattering all the while.

"We're going to run out of battery," Stefan said. Luckily the ebb tide would help them get downstream. "Hope we don't float right out the Narrows."

"Whatever," Roberto said. Although floating out the Narrows would be bad. Their battery was a piece of crap, though better than the previous one. Roberto looked around the East River to check for traffic: crowded, as usual. If they were caught drifting in a traffic lane they could get arrested and their boat impounded. The water police and other people in authority would find out they had no adults responsible for them—no papers—nothing. The various people around Madison Square whom they associated with were not fully aware of their situation, at least not formally,

and they might not appreciate being asked for help if Stefan and Roberto were to name them as responsible parties. No, they had to avoid getting stopped.

"If we can row over to the city we can find a plug-in and recharge."

"Maybe."

"And hey, we found it!"

Stefan nodded. He met Roberto's eye and grinned. They hooped, slapped hands. They rowed to their first underwater buoy and tied the diving bell's rope to it and let it down sideways, without any air trapped under it. It would wait down there for their next visit.

Then they drifted south to where Hell Gate became the East River. Stefan spotted a break in the river traffic, gunned their motor, and made as quick a crossing of the traffic lanes as he could, burning most of the rest of their battery's juice. No police drones seemed to be hovering over them. The dragonback of superscrapers studding Washington Heights had a million windows facing them, but no one would be looking. Surveillance cameras of various kinds would have recorded their crossing, but they weren't any different from any other craft on the water. No, the main problem now was simply getting home on a hard ebb tide.

"So we found it," Stefan said. "The HMS *Hussar*. Incredible."

"Totally in-fucking-credible."

"How deep do you think it is under the street?"

"I don't know, but the detector was beeping like crazy!"

"Still, it must be down there quite a ways."

"Yeah I know. We'll need a pick and a shovel, for sure. We can take turns digging. It could be ten feet deep, maybe more."

"Ten feet is a lot."

"I know, but we can do it. We'll just keep digging."

"That's right."

Then their motor lost all power. Immediately they got their paddles out and started paddling, working together to keep the boat headed toward the shallows of east Manhattan. But the ebb tide was strengthening, carrying them down the East River, which as everyone said was not really a river but rather a tidal race connecting two bays. And now it was racing. Already they were approaching the Queensboro Bridge. The East River got nasty under it when the ebb was strong—a broad muscular rapids,

not whitewater exactly, but a hard flashing scoop of a drop, impossible to paddle in.

They rode the flow down, bounced onward. Below that the flow eddied toward the city. "Hey, here's some kind of a roof reef coming. Let's see if we can catch it with our paddles and take a rest."

They tried poking the top of some sunken building, but with the ebb running so hard their paddles only briefly scraped the top of it, and then they were sideways to the current, trying to row around to keep the bow upstream. It wasn't easy. And the current was still strengthening.

This had happened to them before when they were eight or nine, one of their first misadventures on the water. A trauma in fact, well remembered. Now they paddled desperately, coordinating their strokes as best they could. Roberto was a little faster under conditions like this.

"Together," Stefan reminded him.

"Go faster!"

"Pull through better."

Nothing worked. They spun like a coracle as the current got stronger. For a while it looked like they might be able to pop into one of the last canals before passing the end of Manhattan, but the current was just too strong: they missed it.

Now it was a matter of hoping they could run aground on Governors Island and wait out the tide. There was a salvage landfill there that they had enjoyed scavenging in from time to time, but staying there through a tide was a bit of a grim prospect, they would end up cold and starving. Actually it wasn't even certain they could angle over to it. Again they paddled hard, trying to do that.

Then, even though they were out of all the traffic lanes, a little motor hydrofoil came flying downstream right at them. It didn't veer, it didn't slow down, it was going to run them over. Possibly it was high enough off the water that it would pass right over them, but then again its foils extended down like scythes, perfectly capable of slicing them in half, not just their boat but their persons.

"Hey!" they shouted, pulling harder than ever. It wasn't going to work. They weren't going to be able to get out of its way, it even seemed to be turning in just the curve that would intercept them and run them down. Stephan stood and struck his paddle directly up in the air and screamed.

Just as it was about to hit them, the hydrofoil abruptly turned to the side and dropped off its foils into the water, with a huge splash that drenched them utterly, and swamped their boat too.

Even with their cockpit completely full the boat's rubber tube sides were so big it would not sink, but now it lay very low in the water and would be nearly impossible to paddle. They would have to bail it out first to get anywhere.

"Hey!" Roberto shouted furiously at the zoomer. "You almost killed us!"

"You swamped us," Stefan shouted in turn, pointing down. They were both standing knee deep in their cockpit, soaked and getting cold fast. "Help!"

"What the hell are you doing out here?" the pilot of the zoomer said sharply. Possibly he was angry that they had scared him.

"We ran out of battery power!" Roberto said. "We were paddling. We weren't in any shipping lanes. What are you doing out here?"

The man shrugged, saw they would not founder, and sat down as if to push his throttle forward again.

"Hey, give us a tow!" Roberto shouted furiously.

The man acted as if he hadn't heard them.

"Hey don't you live at the Met on Madison Square?" Stefan called suddenly.

Now the man looked back at them. Clearly he had been about to leave them out here, and now he couldn't, because they would report him. As if they couldn't have just remembered his boat's number, which was right there over them, A6492, but whatever, he was now heaving a deep sigh, then rooting around in his own cockpit. Eventually he threw a rope's end down to them.

"Come on, tie off on your bow cleat. I'll tow you home."

"Thanks, mister," Roberto said. "Since you almost killed us, we'll call it even."

"Give me a break, kid. You shouldn't be out here, I bet your parents don't know you're out here."

"That's why we'll call it even," Roberto said. "You run us over, we're freezing our asses off, you give us a tow, we don't tell the cops you were speeding in the harbor, Mr. A6492."

"Deal," the man said. "Deal at par."

PART TWO

EXPERT

OVERCONFIDENCE