from *Under the Paving-Stone, the Beach!* by Johan Harstad

English sample translation by David M. Smith

(pages 1-112 in original)

If you could do it all again

Big deal, so what?

Please let me know

When you've had enough

Thom Yorke, "Dawn Chorus"

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"Atoms are for those who can't see the big picture." I don't know who it is that says this.

This isn't a city. It's an illusion of a city. But we're moving our way through it, anyway, slowly but surely, in the heavy traffic of a June afternoon. I'm sitting on a hard plastic seat in the open upper level of a yellowish double decker bus, crammed together with other participants in the IAEA's 2018 conference, *New European Perspectives on the Management of Nuclear Fuel and Other Radioactive Waste*, a four-day-long affair, held in an anonymous assembly hall on the second floor of the Hilton on Grzybowska Street and which I, to the surprise of most outsiders, have been looking forward to ever since the invitation came while the snow was still packed in around our house in Pori and both Ebba and I were sure that this year the Finnish winter would never let up. *In Finland, even nature has a hard time getting going, Ingmar*, she often says. Now and then the locals wave to us from the sidewalk, almost exclusively young and female, and the way they do so is meant both as a friendly gesture and a form of ridicule at the same time, I think, and I have enough time to think about it since I'm a full head taller than most of the other conferencegoers and serve therefore as a kind of focal point for most of the ambiguous attention we get. On the seats around me, older colleagues are half asleep, with open mouths, giving sporadic grunts each time the bus makes a turn. Some of the younger folks are turned toward the left in order to take pictures of what was once the Warsaw Ghetto, but most are more occupied with talking to each other than taking in the landmarks all around us or listening to the tour guide in front who valiantly and in halting English tries to convey her rehearsed information about the city through defective speakers that aren't loud enough anyway, as the sound is more or less drowned out for several seconds each time the bus accelerates as it takes us further on into Warsaw.

Excepting a few individualists, along with a professor emeritus or two who regard themselves as above such nonsense, we're all wearing the green hats we received at registration with the words LET'S TALK TRASH! printed in large, white letters, and given the sightseeing bus we've hired and the fact that 65 of the 72 individuals on board are men and the vast majority of them over 40, it's understandable that we aren't exactly setting the local population ablaze with enthusiasm. Even the guide prefers to keep her eyes focused on the buildings she must have looked at and talked about a hundred times before, instead of looking out over a landscape of

middle-aged individuals whose headwear carries, in the most generous interpretation, a highly ambiguous message.

This is nothing new to us. It's always like this. We're all used to the wavering attention spans, the responses along the lines of *ah, interesting*, followed by the absolute absence of follow-up questions when we tell people the kind of work it is we do. They'd sooner be subjected to an insurance sales pitch for an hour. No one is interested in hearing about the pros and cons of the KBS-3 method and possible corrosion problems in copper casing anymore, and the words *radioactive waste* alone seem to be enough for most people to envision men in oilskins and lead aprons, rubber boots and gasmasks who silently tread through tarlike substances with big shovels, and you often get the feeling that other guests at the dinner parties would rather sit further away, as if what we do is contagious or might awaken one's dormant bad conscience over the fact that there is such a thing as consequences in this life. Most people think of Chernobyl, and it's not something they like to think about. Usually, we introduce ourselves with only our job titles and the name of the company we work for, or our advanced degrees; we're geologists, physicists, and engineers of various sorts, or professors in the X department at Y university, none of these good icebreakers either, though at least people don't walk in wide circles to avoid us afterward.

But this is why these conferences are important. This is why these invitations mean something, why you spend months looking forward to being in the group that gets paraded around town at no expense to yourself in a promotional hat from some official sponsor or other: as soon as the lights fall in the assembly hall and we are bid welcome and the first speaker takes the podium to give their opening address, we're among friends. IAEA, Posiva Oy and SKB, with people from STUK, KTH, DBE, URF, WNA, NEA-OECD, WATEC, NEA-RWMC, NRC, IRPA, KLDRA, GICNT and INMM, UNAEC, WANO, Eurad, COVRA, Minatom, IPFM, our colleagues in WIPP near Carlsbad, New Mexico, ERAM, and the radioactive waste repository in Morsleben, Germany, which used to be a salt mine where concentration camp inmates were forced to produce parts for the V2 rockets; people from Asse II, HADES, NWF, NWTRB and the guests from the windswept Yucca Mountain, with whom those of us at the Onkalo repository for spent nuclear fuel near the Olkiluoto nuclear power plant have worked closely. I could have gone into what each of these acronyms and abbreviations stands for, their relation to the next one on the list, and how all of them are connected to one another in a symbiosis that is almost poignant, but you probably wouldn't care, and I don't blame you. It's okay. I'm smart enough to realize that

what we do, seen from the outside, isn't the most engaging stuff and that our inscrutable combinations of letters don't help matters much. But you should know that we do it in order to save time. We aren't here to sell you anything, our jobs don't depend on visibility, popularity, we're only trying to prevent large swathes of the planet from becoming uninhabitable for anything other than plants, which are far better at improvising, at conjuring up new kinds of cells needed to keep things going. We're proud of the work we do. We're all brothers here. And sisters.

Another reason why we're not the best conversation partners in the cocktail world is that what we do is so complex, so worst-case-scenario-depressing, that it has the unfortunate tendency to ruin the evening if we get too far into the weeds of what it is we're trying to do. This doesn't just have to do with the enormous amounts of high-level radioactive material being stored in a highly unsuitable, temporary manner in large parts of the world in anticipation of more permanent solutions, or the consequences of a spill if only one of these containers, which are usually stored in situ and nail-bitingly close to populated areas, should fail, but also with respect to the fact that the ultimate solution we are working toward is meant to store the waste generated by our prosperity for anywhere from ten thousand to hundreds of thousands of years, without the need for further supervision, secure against terrorists and other national actors desperate for weapons-grade material, able to withstand all kinds of weather, earthquakes and natural catastrophes, all wars and hydrostatic pressure from one future ice age to the next. It's hard for people to accept that none of us is going to be here forever. That this planet of ours will one day be cold again, really cold. That everything we've built and created will vanish and be forgotten by whatever comes after us, but that for the atoms themselves, this will amount to nothing more than an indifferent change in state, merely the transition from one moment to the next. Most people don't like being reminded of death while they're just trying to have a good time.

The fact of the matter is that this is now how we think: none of this represents a threat to us. The clocks we use are bigger and move more slowly. This is a challenge, a part of the mandate we are given: to find a solution that lasts, to be the first humans who really manage to think long-term. We build it so we can forget it. In some ways, we are the modern derrick hands, the cowboys at the outer frontier, prepping the land for a new era, and the cattle we tend are invisible and will never lie down to rest in green meadows, and the water they drink will stay polluted forever. Nevertheless, a certain division between inside and outside exists in our field as well, brothers or not, where the primary question has to do with one's area of responsibility, not

status. Among the 70+ individuals on the sightseeing bus, a number that represents close to half of the conference attendees, we belong exclusively to the category who must wear helmets and workwear, ear protection and safety goggles, every day; we're the basement dwellers, not the board members, and we hardly ever go to banquets, as it's not our responsibility to secure financing for projects and deliver reports to the sitting government; we spend our days on installations, at universities, we sit in the breakroom with our dirty boots next to the table and our wool-besocked feet on the chair next to us while we drink coffee between shifts. We sit undisturbed in campus offices, with faded posters from obscure lost causes behind us and our packed lunches in front of us; we look at the figures, do the hard math and the painstaking calculations while the management in their suits and ties do what they can to ensure we get to keep doing just that, many of them with the same basic educational background as us and a good grip on what is at stake, but whose social lives are usually a little different than ours, which makes a day winding through the streets of Warsaw with the family of green hat wearers less attractive, presumably. They have meetings to get to and lunches to handshake their way through, a flight to Vienna they must catch afterward. We don't know whether they accept the hats they're offered or whether they mutter a "No, thanks" to them, turned half away from the hand offering them, as though they simply didn't catch what was being said because they just got a call and there's just so much going on, constantly, so much that has to be taken care of so the world doesn't go to hell in a handbasket.

The same way atoms are split into particles, a further fractioning of the conferencegoers occurs at sundown. At the end of the sightseeing tour or when the last introductory speaker has been applauded off the stage and everyone has come back from their respective workshops. After the average of ninety minutes every participant has at their disposal, divided between the time it takes to go back to their hotel room, drop off the conference folder stuffed with info, notes, and business cards, sprawl out on the couch or chair (the available item of furniture here dependent on the room size, which in turn depends on the fraction based on the person's seniority and job title or function, objectively perceived importance in the field, and the financial framework laid down in the charter of the company or organization paying the person's way to the conference) and throw their feet up on the table just long enough so that it feels like a major ordeal to get up and take a shower and get dressed, and, with all it can involve (some grab a beer from the minibar, others read the paper), get ready for the evening, when almost all of the conferencegoers

meet up at prearranged places in the lobby or just outside, most often in groups of 8 or 10, sometimes more, sometimes less, before getting into taxis which take them to different restaurants in town. The whole thing is like a choreographed dance, the way none of the groups mix with one another and barely seem to register one another's existence, with only the slightest of nods exchanged, not enough to spark any conversation while the groups are waiting and hence risk having one or more persons try to join a different dinner party on a whim¸ making a mess of reservations and logistics and leaving some groups with a skeleton crew of only two or three, which in and of itself can end up being pleasant, though it can just as well be quite awkward, but is in any case less than optimal and therefore undesirable, least of all in this field where last-minute improvisation is hardly ever seen as a virtue.

What normally happens is that the PhDs and professors divide into two groups, in which age is a more important factor than title: the younger folks, with their tenure-track positions at the universities and who are still rising in the ranks, are generally responsible enough to turn in by midnight in order to be ready for intense concentration when the first introductory speaker takes the stage at 9:30 the next morning, and to leave enough time before the start of the day to look over their own PowerPoint presentations one last time. The emeritus professors, on the other hand (along with associated Ph.D.s), whose average age is 77, have nothing to lose and proceed to get properly shitfaced, requiring assistance from the assistants accompanying them to pick them up off of deep Chesterfield sofas in dark-brown establishments when the new day is already a few hours old. None of them are giving talks before lunchtime anyway and usually toward the end of the day, often a condition for their agreeing to the conference in the first place, and you usually don't see them at breakfast until the day of departure, where the weight of the days behind them has finally caught up to them in the form of increasing anxiety about missing their flight back home.

Exactly where the people from the IAEA, governmental representatives and other high-level officials, board chairmen from energy companies, and the leaders of international associations and organizations end up after dark is less clear, but it probably involves lots of receptions and subsequent dinners in various *chambre séparées*, at restaurants of the sort that don't depend on having their name in big, neon letters above the entrance.

Ebba's father, Edvard Hella, has no business being here, strictly speaking, since he primarily worked on fusion rather than fission before he was decommissioned and put to work

keeping an eye on radon measurements in Stavanger, but still gets invited to these conferences due to the work he did on the Kubikel project in Forus back in the day, and in the evenings he usually joins up with a small, rather ragtag group of IAEA folks who don't do well in the world of canapés and cocktails. I don't think it's his first preference, being with them, but he's trying not to *be a hair in the soup*, as he says, even though it's obvious to both of us that it's my group he belongs to, a group largely consisting of my colleagues from Onkalo, Swedes from SKB and FSR, plus now and then people he knows from his time at Barsebäck, as well as some overworked straggler from Novarka we snatch from the lobby because his friends left without him, and because he's the son of one of the original liquidators who worked with a shovel in the M zone up on the roof of Reactor 4 i-86 and who came face to face with 8000 roentgens, which qualifies him (the son) as someone who deserves never to eat alone. Everyone knows this. But I sometimes insist that Edvard at least have lunch with us at these conferences, and this never fails: in the middle of the meal, when he feels certain enough that his presence at the table is in fact desired and that he may say a word or two about his own experience, and that what he says will be taken seriously, listened to, then he is like a huge plant slowly opening out to the sun, unfolding itself, drawing sustenance from all these big conversations about the smallest of all things, plus the chance to catch the latest rumors about the progress of the ITER project in France and his dream of a future in which fusion reactors will render this whole conference, not to mention my job, superfluous. In all seriousness, he hopes the latter will never come to pass, as he takes pains to emphasize each time the conversation veers in the direction of the question about fission versus fusion, the same way he takes pains to let everyone around the table know that to him I am first and foremost a good colleague and secondly a son-in-law, whom he can call on a Monday evening to talk work for an hour, and if he's had any influence on my career at all, it is at best marginal, immaterial. This isn't true, of course, we both know that if it weren't for him I'd never be at this conference or any other, but sometimes I do wonder whether his need for a person he can call to talk about work and discuss hypotheticals for an hour on a Monday evening, is still so great that he has repressed the fact that it is he who has created the conversation partner he wants, like some professional golem. Edvard Hella is the man who, while everything was being taken away from him, nudged me toward studying nuclear physics and geology, and later, when Ebba had come back from France, convinced me that the future for both of us was in Finland, sending us both off in his Volvo 240 station wagon, on what I still remember as the most beautiful

road trip of them all, with the early autumn sun and zero visibility through the rear window, over Suleskard and through Åmot, past Seljord and Kongsberg, through Oslo where we spent the night in beds too small, driving on east into Sweden the next day, past places we'd never heard of and which barely existed on the map, and where we took a wrong turn and ended up in a place called Mörkret (Swedish for "the darkness"), which we managed to find our way out of and drove through the night, to Sundsvall and up to Umeå where the sun came up while we munched on dry baguettes that were baguettes in name only and waited for the ferry to Vaasa, before roaring on down the coast, now in Finland, past Kristinestad and all the way to Pori, the entire trip a result of Edvard pulling one of the few strings he had left (albeit a strong one) and convinced the folks at Teollisuuden Voima to give me a good position at the Olkiluoto power plant, which eventually led me to Posiva Oy a few hundred meters away to work on the expansion of the Onkalo spent nuclear fuel repository, which would be fully operational within a few years. He could have had any of those jobs himself, beyond doubt. He would have been more than qualified. Presumably they tried to convince him when he first reached out to them, but he chose to stay on in Stavanger, to continue studying the radon measurements he so despised, so that Ebba and I would have the chance to take part in what he saw as one of humanity's most important projects, and moreover, in what he described as *an absolutely extraordinary place.* But that was only part of the truth. I think he said no to whatever they offered him out of fear that they might take it away from him again, that one day he'd have to turn his back on Onkalo just as he'd been forced to do with the Kubikel building back in '96, and that he would be the one the politicians pointed to as responsible for all the money that had been spent, back when there weren't as many voices to corral in favor of holing away spent nuclear fuel for the next hundred thousand years. I think that's why he calls us once a week, always on the same day, at the same time: not only to check in on his daughter and talk to his grandchildren about their days, but to listen for the sound of something he knows will wreak havoc sooner or later, if it's not finished, sealed, and abandoned in time.

Finland wasn't entirely uncharted territory to the Hella family, Pori included. While we others had bought cheap toys on Mallorca that fell apart long before we got home, or stood in line in Legoland to ride a drooping pony with back blemishes, Ebba & co. had spent several summers on the long, sandy beaches of Yyteri as children, partly because their father had been a guest

researcher at Olkiluoto, which represented nearly a fourth of the country's electricity output, and more importantly, because both of her parents appreciated the annual Pori Jazz festival. For our part, we primarily associated Finland with cursing and drinking and Matti Nykänen. And people who pelted themselves senseless with birch branches while sitting naked in the sauna and wept afterwards. But for her it had been a small paradise, and no one went ski jumping in the summer anyway, she said. For up to three weeks at a time they'd alternated between living in tents and in cabin rentals on the campgrounds on Yyteri Beach on the outskirts of town, where she'd picked up countless ticks with Finnish summer friends in the outlying forests, and learned to swim in the sea in the hopes of drowning the nasty critters that had attached themselves. She'd learned to remove ticks too, once their imperviousness to water became evident, and played in the sand dunes instead, even though it strictly wasn't allowed as they were (and still are) protected by conservation provisions. She'd been five, six, seven years old and had taken a book to read as well as her own Walkman while her parents went to hear Miles Davis, or Oscar Peterson, and she knew the names Jukka Perko, Herbert Katz, Esa Pethman, had even been to some of their shows, and it was all fine enough, but she was happiest when her parents went without her and she was babysat by the lady the in neighboring cabin, which meant spending the whole evening with the same girls and the boy she hung out with in the daytime, only now there was no one who cared what she watched on TV, or how long she'd been swimming, nor anyone who launched into long lectures about all the carcinogens in candy nowadays, only a Finnish mom who *trusted her own damn gut* when it came to letting each of the kids have their own bowl of Jauhi's salt licorice plus a *Tuubipurkka*, a pink tube filled with huge gobs of chewing gum you could squirt big mouthfuls of and churn and churn till your jaws ached, and each time you forgot not to swallow any of it, she said, with finality, so you wouldn't feel bad about it: *No one ever dropped dead from swallowing gum. It's the damned men and their constant itching for a fight that kills people.*

It must be said: When we first arrived in Pori in 2008, my first instinct was to keep on driving. There was nothing especially magical about this town and its sky, which had the color of industrial steel. This came as a surprise to me, I'm not sure exactly why, just that everything felt somehow not quite right, like this wasn't where I was supposed to be. I wouldn't go so far as to say I hated the place, it just looked like a city made by someone who didn't want to make a city and even less to live there, a grudging city, which had taken root only out of necessity when changes in land mass made the river too narrow further inland. It repelled me with its beige, pea-

green colors that looked like they'd been picked out at night by blind painters with no motives other than cutting costs. An unbelievably sad excuse for a town, like a forgotten Soviet outpost. I went for long walks through it while Ebba put our house together, and even though the town was small I always got lost, to my intense irritation, in streets that all blended together, giving me the feeling that the streets here split off from one another and multiplied while I was walking, like in a video game, and every morning I drove the fifty kilometers to the Olkiluoto nuclear power plant while repeating *here we cannot stay* over and over to myself. I felt like I'd been lied to, cheated, only happy whenever I could get away, leaving the place behind and pretending like it never existed, or when making intricate plans for our escape back home in a way that would leave both our careers and our dreams intact; sometimes on the way back, I tried to focus just on the pavement in front of me and resisted raising my eyes to look at my surroundings and see the approaching town again; only once I reached the part of town called Koivistonluoto and turned onto Päivärannantie, from which I could see our house, did I start opening my eyes fully. I parked the car and walked inside, hearing her voice, seeing her lean against the door frame, inhaling the same smells I'd loved ever since I'd set foot inside the tiny house at Breidablikk in Stavanger in the 90s and said hello to her mother, now seeing everything she'd done while I was gone that day, the furniture she'd arranged, walls she'd painted in entirely different colors than those the town outside seemed to prefer, and as soon as the sun went down and night fell, so that I could no longer see anything outside the windows and think about where we were, nothing existed except the two of us, and nothing seemed at all difficult anymore.

This is not at all what it was like for Ebba, who already had a connection to the place. So here we stayed, and little by little, I also fell into the rhythm. I learned to love the city because she loved it. First, our house, then the garden, as we fixed it up and it became a place we enjoyed spending time in, then the sauna in the outbuilding I opposed at first on the grounds of it being a little too stereotypically Finnish, but which I eventually couldn't get enough of and nowadays fire up two or three times a week to sit in, quiet and content, like a parody of the obstinate, Finnish male. And the second summer here, I trimmed the hedges down to where I could see the neighbors and found myself drawn into a conversation with them. From there things began to take on meaning, reference points were established, and the streets underwent a transformation, such that the pale colors and nondescript concrete buildings stopped bothering me, replaced by street names I could now comprehend and associate with new friendships, along with old wooden

houses and neo-renaissance buildings I'd never noticed before, as it occurred to me Pori's strength consisted in the fact that it didn't need to put on airs, that it put people before pretense, and that was more than good enough. So, in the summer, when the tourists are in town, we hold our heads up high, proud to be the ones who live here, and in the fall, there's nothing more beautiful than the way the lights from the cinema on the Eastern Promenade hits the leaves that fall along the avenue that stretches all the way up to Valtakatu and the park in front of the city hall, which makes the street seem enkindled and aglow, and the blueish, strangely warm, snug light in the twilight in the winter, outside the yellow house where I used to pick up the kids from daycare as they babbled away, almost beaming, going on in both Finnish and Norwegian about the useless but nice knickknacks they'd made, while we walked through the fresh snow toward the parking lot, and sometimes I still stop outside, not quite able to take in all the time that's passed, the fact that none of them go here anymore, that other kids are running around in there while mine are hanging outside the schoolyard somewhere, or else biking down the street on their way to or from friends and that it'll only be a couple years before they're standing outside the movie theater in the autumnal darkness, their hands in the pockets of jackets that are too thin, unmoved by the beauty of the light.

Also during summer: Her parents coming to visit, a sign of the season ever since the first year we moved here. Her mother comes first in July, just in time for the festival, before flying back to Helsinki and driving her rental car up to Lahti where she apparently *knows some people*, and Edvard arrives by train a couple days later, standing impatient outside the station, though becoming more cheerful and sociable once he's put down his suitcase in the guest room and walked out to the garden to check on the plumtrees and tell us how they should be trimmed. He always ends up staying a week longer than intended, *if it's not too much trouble*, which it never is, since he requires so little attention (most of the time he just sits in a chair in the garden reading) and the kids love him, so he'll take them on day trips to Tampere and Turku and when they return the car is full after they've raided the electronics and toy stores out there; this'll keep them busy until well into the fall.

After they're gone, my mother arrives. So does Odd. Sometimes he brings his family with him.

Pori is a city with almost no immigrants, a place where the average stay for travelers according to available statistics is 3.2 days, with over 80% of the visits during the summer, with

the reason given for 98% of the visits to experience Yyteri Beach and/or Pori Jazz, with the other 2% claiming to have made a wrong turn somewhere. We realized this after we moved here and it became clear we had no plans to move again, after the fall was well underway and we still around in the grocery stores and at the movie theater, out along the streets, at the Porin Ässät hockey games on Saturdays, we realized how we stuck out more than we'd anticipated and that there was no way to blend in, not even when winter came and the snow fell, and that rumors and gamma rays are able to penetrate almost any obstacle and the next question we got after confirming we'd left Stavanger, left Norway for good, was usually confined to one word: *Why?* I've no idea if they actually believed the answers we gave, not at the outset, but as the years went by and we showed no sign of renting any moving vans, it was as if the question lost more and more of its meaning, until it seemed the most natural thing in the world that in a splashy house out in Koivistonluoto there lived a nice Norwegian lady named Ebba Hella who oversaw Pori Jazz and who lived with her two children and a *vittu normani* who each morning got into his Fiat Punto from the 80s and puttered off to Onkalo in order to bury Finnish nuclear waste once and for all.

For the residents of Pori, the reactors at Olkiluoto have always been there, in any case since it was first commissioned in 1979, though they lie 50 kilometers away. You don't see them, you don't hear them, you don't worry about them; most are more concerned with how to pay their electric bill than where the electricity comes from. Posiva Oy's Onkalo repository has also long ceased to be of interest to the media, 15 years after the first heavy equipment started digging a winding path to a depth of 520 meters; the newspapers from that time were thrown out long ago, no news networks had the attention span to follow the story as the years went by and the equipment kept digging meter by meter, and when the bottom was reached and construction began on the repository itself three years ago, no one covered it except for trade journals, along with some clueless summer intern or other from the Finnish dailies who'd no idea what he was looking at or what questions to ask, hoping in vain for some scoop to reveal itself, before one of us finally helped him turn out a short write-up for one of the left-hand pages so far back in the paper that most people would never see it. In Finland, people trust the experts to know what they're doing.

In Warsaw, on the other hand, the very word *Onkalo* is enough to get the conferencegoers to prick up their ears. We enjoy a certain status here as the lodestar in the night sky of radioactive

waste, and if you're aiming to achieve a kind of rock-god status in the fields of hazardous waste management and geological surveys, Onkalo is the place to be. It's no surprise therefore that a certain buzz has built around the talk I'm giving on the last day of the conference, "Below the Waste: Advancing Geological Repositories from Concept to Operation," the title I settled on after mulling "Subterranean Atomic Blues" for some time. We aren't competitors here, so one man's hard-earned lesson is another's dollar saved; the goal is to keep costs low enough so that we all survive the next fiscal year, the next government, the next recession. All of it inevitable, always looming in the background, an infernal machine that has to keep on producing progress. Our job is to make sure we get the job done before someone changes their mind, for that too is inevitable, getting rid of all this waste being akin to offing a mafia boss, neither uncomplicated nor free, so of course there will be disagreement in the halls of power about how to do it in the most financially discreet manner. Which is part of the reason why the past four decades have seen one mediocre proposal after the other from the authorities, backed by lobbyists who do their work more or less in the shadows. For instance, the idea of sealing the radioactive waste in special containers and towing them out to the open ocean, before dumping them without further ceremony to extreme depths and counting on them to implode down there, never to become anyone's problem again, or else sink to the bottom intact and lie there undisturbed forever. Only that there is no such thing as *undisturbed*, as nature will always fight for entropy and waits patiently for the chance to do its work in peace, so sooner or later these containers will start to leak radionuclides and who really knows for certain how much they'll spread and where they'll end up, to say nothing of *what* they'll end up as. The method was later banned by international convention, but only after Belgium, France, Germany, Italy, the Netherlands, Sweden, Switzerland, Great Britain, Japan, South Korea, and the United States had already used this method to dispose of low- to intermediate-level radioactive waste. Other, related ideas have involved burying the waste under the ocean floor by way of well-boring technology from the petroleum industry, as a merciless thank you for all the oil that's been extracted from it, or, even more cost-efficiently, to put the waste in containers heavy enough to sink like projectiles fired downward and bore themselves into the sediment. Another proposal involves subduction zones, that is, to use the tectonic plates to transport the waste so far down that it will be recalled only as myth.

Over the years, some have also proposed melting rock together with vitrified, high-level radioactive waste by sinking it down into wellbores and letting it melt into the rock until the heat loss sooner or later causes the radionuclides to be sealed within. Or to melt the rock around the containers. Or to use small, nuclear explosions to raise temperatures enough to melt the waste into the groundmass, hence preventing it from escaping as long as the rock volume is at least a thousand times greater than the volume of the waste and the explosions do not disturb the geological formations and pollute the groundwater. No one has yet managed to do a well-functioning, practical demonstration of this method. In the 1980s, by the way, a variant of the melting idea was to place heat-emitting radioactive waste in suitable containers and place them on the Greenland ice sheet or Antarctica and let them bury themselves as they melted their way down into the ice, which would then freeze over them and seal them in. Every signatory of the Antarctic Treaty of 1959 politely declined to implement *that* method.

Thus it goes on. It goes on in the form of attempts to inject liquid radioactive waste into porous enough rock that it would absorb it, as with the sandstone beds at Krasnoyarsk-26 and Tomsk-7 in Russia in the 50s and 60s and at Oak Ridge in Tennessee, before this too was dismissed as a poor solution, until NASA's report on the question of whether rockets could be used to blast the waste into remotest outer space, or, more spectacularly, aimed straight toward the sun. A solution that almost certainly would have been chosen if not for the astronomical costs associated with every kilogram of material departing the atmosphere. Not to mention the protests that would ensue. Or what would happen if the rocket exploded on the launching pad.

After Chernobyl, a steel and concrete sarcophagus was built over the exposed reactor, and now, over the next few months, the enormous Chernobyl arch made by Novarka will be pushed over the sarcophagus to protect the world from 240 metric tons of nuclear fuel, melted control rods, graphite, highly radioactive dust, uranium, and plutonium for the next hundred years. But no longer than that. In our industry, it corresponds to the time between the light turning green until your foot hits the gas pedal.

For the time being, each country by and large stores its own waste, if not out in the open, then above ground or just below it. This is by far the most optimal solution, if not the only one for many countries at the moment. Low-level radioactive waste comprises most of the overall waste volume; after being sent into long-term storage, it will reach radiation values not considered dangerous within 50 to 100 years. Intermediate and high-level radioactive waste, on the other

hand, pose a whole different challenge, existing in a form of limbo, where it can be cooled with water or held in check in special containers for the time being (or until a new government inherits the dilemma), but *for the time being* doesn't last forever and the problem will persist for hundreds of thousands of years, so something has to be done. This is where Onkalo comes into the picture as a pioneering firm, given that there currently is broad consensus that deep geological disposal is the soundest way to permanently dispose of this kind of nuclear waste at present. The dream, harbored by the leaders of all nations with nuclear power and atomic weapons under their pillow, is to make it possible for them to walk out in their slippers with the atomic rubbish and never have to think about it anymore.

It's evening, night really, and dinner was a while ago, but I don't want to go home. It's not very often I get to travel anymore. The others have taken taxis back to the hotel, but I'm on foot, walking through the streets of what used to be the Warsaw Ghetto during the war and now, at least if what my father impressed upon me as a child is to be believed, bears only a pale resemblance. A copy, a forgery, just as he deemed the rest of the city, hidden behind an old name. But in contrast to other parts of Warsaw, which presumably were painstakingly reconstructed as they'd once appeared, most of the buildings here are postwar, new buildings and glass facades with office space and shops. Brutalist housing. At the height of it, almost a half million Jews were packed together in this area of just over three square kilometers, which I'm trying to picture to myself without quite succeeding. But when their patience ran out, the Nazis were thorough, sending thousands of troops in to light every last building on fire, dynamiting the ones that wouldn't burn; they razed block after block until nothing was left before building KL Warschau on the ruins, a concentration camp, as a final humiliation. On Himmler's orders the prisoners were made to clear away mountains of brick and scrap iron and what had been furniture and people's possessions, fill every cellar and duct with filling compound, until the entire area was totally flat, cleared away, reduced to no more than a rumor. Twenty years later, in the mid-60s, the remnants of KL Warschau were themselves demolished. Only somber bits and pieces of a few apartment blocks remain in these streets as proof of the ghetto that once stood here, and that's where I'm headed, to Próżna Street 14, where the painting has been burned off and the windows are missing, some of them replaced by planks or carelessly walled shut.

"I feel sad for this town."

A voice, suddenly. A guy's standing right behind me, having come from who knows where. An American, judging by the tone; they have this way of striking up conversation with strangers without spending five or six months building up courage, like we do back home in Finland.

"Sad?"

"It is sad for those who thought for the longest time that the city would survive, and that any resistance against all that machinery was a good idea."

He might be my age, maybe a little older, hard to say exactly at this time of day and given wine's tendency to smooth out the details. But he's nicely dressed, wearing a suit with a light summer coat. Expensive glasses, just a touch of grey hair. A friendly look to him. Not obviously the sort who'd try to rob you or sell you drugs.

"Do you mean it was all meaningless?" I ask him, honestly. There is something about Americans that makes you want to talk to them, perhaps it has something to do with the language and how it reminds you of all the movies you've seen so it feels like you already know them, in a way. "What should they have done instead?"

"I don't know," he says. "Not everything people do is rational, even if well thought-out, wouldn't you agree? But regardless: would it have made any difference if they hadn't resisted? No? No. They would have been murdered anyway, if not here, then at Treblinka. Warsaw was already lost in '39, at least I think so. The only thing they did was fight against time, and that never ends well in the long run. But there's that damned self-preservation instinct for you. It's hard to turn it off. Most animals are better at accepting their circumstances and pick a quiet spot to spend their final moments. But yeah…sorry if I'm intruding when you're probably wanting to be alone with your thoughts, I didn't mean to start talking about this, just couldn't help noticing you, so just let me say I am looking forward to your presentation tomorrow with great interest. You are Ingmar Olsen, right?"

I nod. "You're part of this conference?" I ask, not especially surprised for some reason. Just then I seem vaguely to recall him from the sightseeing bus the day before, he was sitting quite far back or almost at the front, the memory's a bit hazy, could be the wine again.

"Correct. I'm in the American delegation. Was one of the ones at Yucca Mountain."

"Sorry," I say, shaking my head. "I was sorry to hear the final decision."

He waves it off. “No, no. Forget it. Not your fault our politicians lack an expansive time horizon, is it? If Warsaw was already lost when the Germans invaded, Yucca was shot down by Obama way back in ’08. We never stood a chance. Not that anyone was surprised. Our country’s been fighting about where to put this stuff ever since the Carter administration. It’s never good when science gets mixed up with politicized science, everything gets muddied, right? But we’ll have our chance again. Trust me. Regardless, I just wanted to say hi and let you know it’s inspiring to see the kind of work you all do up there in Finland.”

“I’m glad to hear that.”

“Like I said, looking forward to your presentation.” He turns to go, but stops. “Unless…I mean, unless you were planning on standing here in deep concentration…are we going back to the same hotel by chance? The Hilton, right? In *Gry…Grysiba*…damn Polish names, too many consonants. Whatever the street is called.”

“Grzybowska,” I say.

“Right. What you said. What say you to a nice little nightcap at the hotel bar before we turn in?”

I hesitate. I’d really prefer to be alone, walk around a bit more, but it feels too standoffish to say no, so stereotypically Nordic.

“Okay,” I reply.

“Awesome.” He extends a hand to me. “Cecil Bjornsen, Virginia, Minnesota. Originally.” Then he points at one of the manhole covers behind me. “The Germans threw firebombs and explosives down the sewers during the uprising to suck all the air out and kill everyone taking shelter down there, you know that? But they almost never dared go down there themselves. The Polish resistance used the sewers to move around in the Old Town, while the Germans got more and more paranoid watching people seemingly evaporate in front of them only to turn up somewhere else. That’s why they leveled the city to the ground. To make absolutely sure. The most interesting thing about this city is what was under it.”

The bar at the Warsaw Hilton is dimly lit in an attempt to create a cozy, but definitely exclusive atmosphere, nestled in deep red tones, with light fixtures resembling skewered glass jellyfish hanging from the ceiling, which manages to seem both innovative and sinister at once, not that it seems to bother the young bartender who in any case looks to be having himself quite an evening

at work, perhaps because the place is so empty, which allows him to go back and forth taking people's orders directly at their tables and in the same breath chat them up about whatever's on their mind. He is open to talking about almost anything, and since he's not busy, he accepts the challenge of making drinks for people based on individual preference with the same gratitude as when taking orders for mind-numbingly boring drinks like mojitos or two glasses of red wine, which is what we order from our deep, seaweed-colored chairs by the window.

"I can't emphasize enough," says Bjornsen as soon as he has a glass to toast with, "how what you've all managed to achieve—what you're at the threshold of achieving, up there at Onkalo—it's, what should I say, unparalleled? I applaud you, really. Everyone there must be proud, no?"

"To some extent," I say as I clink my glass to his. "But pride doesn't really have anything to do with it, I'm not sure that's how we look at it. More relief, I think. Now that we've come this far and all the analyses are pointing in our favor."

"So the math checks out, is what you're saying?"

"Looks like it."

"Always a good thing, always. And you, born and raised in Finland, I assume?"

"No, moved there. From Norway. We moved, let me see, 11 years ago, almost. But if I can say one thing about Finland, it is that it's like the kind of gift you get at Christmas that you don't know what you're going to use it for or what to do with it, but after a while you wonder how you ever went without it. Respect the sauna, that's my number one advice if you ever go there. And don't forget: almost everything apart from bread and shrimp you eat with utensils. And the classic American slap on the back is a serious faux pas over there."

Bjornsen has a crude laugh that is more to formally signal that a thing is funny than a spontaneous expression of amusement. He nods as he raises his eyebrows so much they practically levitate. "Norway, huh?"

"Yes, Stavanger, on the southwest coast. Way less exotic."

"Ah, Stavanger," he says in an exaggeratedly dreamy tone, "I've been there a couple times. Great town, really."

"You've been there?" I'm never not surprised by this.

"Absolutely. Because of ONS, you know, the oil conference? Not exactly an industry lacking in waste, either. I was there to give advice from our field. And to meet relatives, if it's

even possible to still call them that, the connections that far back are always so thin, so tenuous. But in any case, the stories about the far more fortunate side of the family that had the good sense to stay put instead of getting asthma from the dust in the iron ore mines at Mesabi Range were a central part of my upbringing. We had rosemaling on the cabinets in our living room to remind us that we could have been born somewhere else, plus an old travelling chest that no one could quite agree where it came from, so it became a source of much nostalgia. My father even tried to teach himself Norwegian and sing a few of the old songs for us on May 17th, all Greek to us, I'm afraid."

"But your relatives are from Stavanger?"

"Well, no. Originally, they were from the eastern part of the country, I think. A farm somewhere near Telemark. From there they came to Ellis Island in the 1870s, with everything they hadn't left behind packed neatly into the travelling chest I mentioned before. It's one hell of a journey, when you really look into it and read about it, one hell of a story. Very dramatic, I must say. They were the sort who didn't run and hide at the sign of a few raindrops. But some of them stayed behind, they either couldn't or wouldn't go, and the last living relative in that branch of the family eventually settled in Stavanger at the end of the 70s. At a place called…what was it again? Ah, Forus. Where most of the oil companies are headquartered, as I understand."

"I grew up there," I say, somewhat shocked.

Bjornsen puts his hands behind his head and leans backward in his chair with satisfaction:

"Small world, huh? Who would have thought. Beautiful place. With the fjord and all."

"You're the first one who ever called it beautiful, I'm sure."

"Ah, don't undersell it. I could have lived there, you know. A small house by the fjord or something, though the houses I saw at the water's edge in…*Gausel*?" He looks at me questioningly when he says the name of the place; it's hard not to chuckle at his sloppy pronunciation, but my astonishment at the extent of his local knowledge wins out. "Those houses weren't exactly modest," he says. "More money in oil than in our line of work, clearly. If only we could have more than one life, have time for everything, right?. But Forus…is that not also where the Kubikel project was based, if I'm not mistaken?"

"My father-in-law was the leader there until it was shut down. He's also here at the conference."

"An even smaller world, then," says Bjornsen, now genuinely delighted. "Well, that explains your career choices, I would think. My—well, I'm not quite sure what to call her, we always just referred to her as Aunt Blom, though more likely she was a second cousin or something—my only living relative there lived in Forus for much of her life. I should add that she's in a nursing home now, I don't recall the name of the place, something to do with a lighthouse or something like that, do you know what I'm referring to? Anyway, she's in her 80s now and maybe not quite, what should one say, *mentally all there* anymore, but she talked very warmly about the place. About Forus. How it used to be. Not to mention the children out there, she always had such good, detailed memories about them." He looks right at me, as if expecting me to do something, but then when I don't, he withdraws his eyes and smiles before going on: "So after my last visit to her, I took a taxi out there, you know, to walk in my forefather's footsteps, probably. To see how they'd lived their lives. Who knows, maybe you even met her when you were a kid? Gerda Blom was her name."

I frown and look up at the ceiling as if I'm straining to remember, before saying, "I don't think so, but you never know," and I'm not entirely sure why I do this instead of saying that of course I remember her, she lived in the grove on the other side of the train tracks by the abandoned silos. But I can feel my heart beating faster and a wave of unease slowly coming over me.

Cecil Bjornsen takes another swig of wine, looks at me. The bartender stands smiling to himself on the other side of the counter while his lips move to a slow Lionel Richie song.

"Magical places, those suburbs," says Bjornsen, almost dreamily. "Nothing much to do there, so you invent your own entertainment, right? Along the sideroads and behind the neighbor's hedges. In particular she mentioned a couple of teenagers who were kind enough to help her find her dog once," he goes on. "On New Year's Eve, a black German shepherd, I think it was. They really made an impression on her for some reason, these teenagers who weren't out drinking themselves senseless like everyone else. Probably your age now. What were their names, again?" He clacks his tongue. "Jonathan, I think. Wasn't one of them named Jonathan?"

Suddenly I don't like the man one bit. I'm very confused and uncomfortable.

"I see." He looks at me again. "Something tells me you've heard of him, too? More wine?"

"I haven't, no," I lie.

"Are you sure? They were real troublemakers, from what she told me. Hung around buildings in the industrial park nearby and got up to stuff. This Jonathan also had a father who I take it was some kind of local personality, a hairdresser who was well-liked by many, including my Aunt Blom. From what she told me, he gave all the respectable ladies in Forus the same hairdo. Funny thing to imagine, isn't it? Still doesn't ring a bell?"

"Sorry. Don't know him."

A change come over Bjornsen's face, he grows more serious. He stares at me, intently, before clapping his hands and emptying his glass in one last, big gulp.

"Too bad." He smiles, but the smile's emptied of any actual content. "No worries. Just thought I'd try to impress you with my local knowledge about your neck of the woods that I'd had the honor of visiting. I guess there were more hairdressers and people with the same names there than you can be expected to remember. Damn, I hardly remember myself what the girl next door on the 8 1⁄2 street was called. Even though I remember putting my hands under her sweater while her parents were at work, and that we never finished our math homework. Weird what we remember and what we forget, no? As if there's just too much life to keep it all straight in our heads. Well, well. Anyway, it won't be long before very late turns into very early, so I'd better turn in." He stands up and drapes his jacket over his arm. "Maybe we can talk more after your presentation tomorrow? Great to meet you, regardless."

"Of course," I say.

"Well, as they say: Good night, and good luck."

Back in my hotel room, I find myself unable to get ready for bed right away like I'd planned, instead pacing back and forth between the bathroom and the bed, unable to make up my mind what I should do. I end up by the window, taking in the view. To say I'm worried isn't quite accurate, nor that I'm afraid; it's more an uneasy feeling that something just happened to me and that I let it go by or didn't quite understand it.

And Forus. I haven't been there since the turn of the millennium. Not even once. In Stavanger, yes, but not all the way out there, not for many years now, if anything I've actively avoided it. The last time: we were carrying the case out of the house and put it in the car before driving away, Jonatan and me, one afternoon in 1998, I remember how he avoided looking in the

rearview one last time before he turned out onto the main road. A few days later we'd all left town, one by one, we all left. First Peter, then Ebba, then me, and finally Jonatan.

Weird to hear the word again.

Forus.

I thought I was done with the place. Can't even remember the last time either Ebba or I ever referred to it.

From the window in my hotel room, the street seems silent, powered off. The city that doesn't exist sleeps heavy on its side. I am awake in it, unable to find any peace. A car or two passes, to be sure, eight floors down, but there's really no traffic to speak of, I don't hear it anyway through the thick glass, perhaps they're no more than objects flitting in front of my eyes. A young couple sharing a bike through Grzybowska Street, he pedals while she sits on the rack behind, turned to the side, wearing a backpack, with long, black hair and what looks like a small dog in her arms, they have got to be the world's most minimalist couple who are either moving or carrying another dying dog to a 24-hour veterinarian in town, hard to say.

On the other side of the street below is yet another high-rise under construction, covered in scaffolding and fire-retardant netting that hangs lopsided and is torn here and there, reused too many times in the hands of careless workers who don't take the time to hang it up properly each time. The ground is covered in sand and gravel, cable reels tipped on their side and paving stones that have been torn up from the sidewalk to make way for a new one, making the construction site look like a battlefield, a facsimile of what the city as a whole once looked like. No one is at work there at this hour, it isn't so urgent as to require a night shift, so all the safety helmets are hanging unused somewhere waiting for the morning which will soon be here, bringing excavators and screeching construction elevators, but then again, it's not like this city has never known noise.

A taxi driver stops by the gas station at the intersection, walks in and comes out a couple of minutes later with what appears to be a hot dog. To the extent I can identify it at this distance, that is. I assume it's a hot dog. He walks across the small patch of grass next to the gas station and stands looking at his food a long time, impossible to say whether it's because he's been looking forward to this moment all night and is now letting the joy of a few well-deserved minutes' break at last wash over him, or whether he finds the sight of what he has in his hands positively revolting, causing him to think that this is what it's come to, this is what he is, standing

outside a gas station in the middle of the night to stuff his face with this offal so he can keep going for yet another day. Then he raises whatever it is to his mouth while also raising his eyes up to the side wall of a decrepit and abandoned apartment building on Wronia Street that no one has paid any attention to since it burned in ‘44. All the windows are gone, covered by moisture-damaged OSB posters, but the whole wall has been painted turquoise and covered by a huge mural of a pregnant woman in a red shirt and red top, with her hands on her belly and staring in the direction of the taxi driver with a look both accusing and bold. My first thought is that this is some kind of art from Africa whose significance I’m in no position to judge, but then I see the *Rak ‘n’ Roll* logo off to the side and recall it from the airport, an ad for a foundation that helps cancer patients, and this specific campaign seems to be about the dilemma: What if you’re pregnant, but also dying? The taxi driver looks down at his meal again. Then at the clock. Then the mural one last time, before turning away, crumpling up the food wrapper and walking back to his car, starting the motor, and driving off.

I go into the bathroom to brush my teeth, but change my mind, walk out again and sit on the edge of the bed, turn on the TV. I can’t work the remote, it seems, the channels won’t change, it’s either turned off or on or on AV2 which amounts to the same thing as off, so I sit there watching a Polish film with no subtitles that might be about a man with financial problems trying to sell his car or just wants as many people as possible to thoroughly examine it and tell him if they find anything he can take back to the dealer and complain about. Whatever is going on, he seems more and more despairing about the situation he’s in, making my own anxiety grow until finally I turn it off, only to realize that the silence in the room is even worse now. I think I hear someone out in the hallway, steps getting closer before they stop, if not right outside my door, then close to it. And no sounds of a key card being taken out, doors being opened. I don’t move, just look at the door, holding the remote, unsure whether I should turn the TV back on or walk over and look through the peephole. Both seem like bad ideas. I get up, but don’t move, unable to decide on anything whatsoever, until I hear the steps continuing on down the hall and disappearing. Could be anyone. For several minutes I stand there waiting for the person to come back, before I come to a decision and turn the TV on again, even though I really don’t want to. The guy in the movie has a bicycle now, I’m not sure whether this counts as an improvement in his life, because there’s something in the way he pedals that seems so determined, or maybe resigned. In several of the scenes he’s shown crying uncontrollably, including while he’s out

biking, which, it occurs to me, has never been a combination I've personally experienced and which I suspect is something that only ever happens in the movies.

When I finally go to bed, it's past 4. The sun is coming up.

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And so, finally, and because he liked to think about numbers in general, if not exactly numbers in terms of *money*, but numbers in terms of digits, not in any complex order of magnitude, but in pleasing computations, far from the pain threshold of what he normally surrounded himself with from day to day, sat Jonatan Madland, one day in 2018, out on the bridge wing of the ship—he and everyone else on board were consistent in referring to it only as *the boat*—where a simplified duplicate of the navigation system was installed for the use of the captain and the local pilot when 250,000 metric tons were to be docked with a combination of security, elegance, and efficiency, closing his eyes while going through various possible constellations of TEU on the container ship he was on, the *Mee-Kwon Taipan*, which still had six hours to go before it would leave Yangshan Port. The first thing he had to do was work out for himself the total number of TEU to be loaded on board, and then the total weight. TEU is the only thing that means anything and what everything revolves around. This is the industry's term for containers, it stands for *twenty-foot equivalent unit* and indicates the degree of imagination that prevails across the container shipping industry generally. In spite of international standards like ISO 6346, used for the coding, identification, and marking of intermodal shipping containers around the world—a standard enforced by the 100% humorless Le Bureau International des Containers et du Transport Intermodal (BIC), and in spite of the fact that containers exist and are constantly being sent back and forth across the ocean in a vast number of sizes and configurations, each of them named according to a format specified by the ISO 6346 standard, the imprecise concept of TEU is still by and large the only term that applies to all containers. Even though the overwhelming majority of TEU are 40-foot containers with 8-foot height/width (each of them is then counted as two TEU when loaded onto the boat) along the increasingly common 60-footers that no one likes to handle, nor can anyone agree what to call them, other than a real pain. When he said *Yángshān Shēnshuǐ Gǎng* in Mandarin, he said it with the same refined matter-of-factness with which his parents pronounced the words *Bob Dylan*, as his mouth had long automatized the precise muscle movements after finding the most energy-efficient way of saying the name. The total TEU and gross tonnage, combined with the travel route and ports of call, allow you to calculate the fuel

consumption. Don’t write it down: the whole point is to be able to do these estimates in your head and that it should be relaxing to play with the numbers. Take it easy: you’ll get the hang of it eventually. You can also rest assured that those who’ll do the actual calculations before the boat is loaded and sets sail will more than have a handle on hydrostatic equations and the use of digital stowage planning systems like MACS3 and .EDI files at a level you’ll never come close to mastering. He’d been 27 years old when he came to Shanghai in 2006, after a 12-hour flight from London in economy class because that was probably what was expected the first time you flew long-haul at the company’s expense, a rite of passage that sympathetically enough had nothing to do with looking down on those who couldn’t afford business or first class, but with arriving to Shanghai completely exhausted after a half day in the middle seat or a window seat in row 33 by the emergency exit on the 747 most people took via London, a window seat in name only given that it was placed about a meter behind the emergency exit itself and even though it gave you a little extra legroom, you paid a price for it in that, for reasons that are unclear, it was unendurably cold at that very spot (which then gave you the option of shivering your way to your destination with cold sweat rings around your armpits or suffering the indignity of covering yourself with one of the airline’s blankets, which was sealed in plastic wrap before departure to give the illusion of having been ever so superficially washed and which made everyone look homeless, completely shipwrecked), not to mention that the seat was three inches narrower than the ones next to it, and both the tray table and in-flight entertainment screen were placed inside the arm rest, making it an acrobatic feat to get them in and out, not to mention that you almost always had to disturb the person next to you who, more often than not, had been repeatedly laying claim to that very armrest for several hours now. What they wanted, Mee-Kwon, was to see whether you commented on the trials you’d endured the last 12 hours or if you were one of those who let it slide by saying *it was a little chilly toward the end there*, an answer that opened the floodgates and made people howl with laughter consisting of 60% schadenfreude and 40% relief that you weren’t a whiner, but a doer who went through the subsequent little ceremony during the first dinner with your future colleagues or the board or whoever it was, in which a representative presented you with one of the company’s platinum cards that from that point forward automatically gave you access to business class or better, and a guaranteed seat on every flight with two or three airlines, and a far more pleasant experience. When it comes to calculating the weight (and cost, you’ll need this number later) of fuel, assume 150 metric tons a day at 19 knots,

which is 5 knots slower than normal cruising speed, but far more fuel efficient, plus add some % if weather conditions or delays are expected to be worse and longer than the previous voyage. With this determined, you can start systematizing the TEU of the different cargo holds, rows, and levels—what goes where? Correct planning here is not only the alpha and the omega, but like everything else, it has a significant financial aspect. The first question has to do with volume and gross weight of X number of containers going to what we'll call port A, compared to the same for arrival in port B and maybe also destination C. What up until now was easy for the inexperienced has become a headache, for containers headed for A should be loaded higher than containers to B and C, since A containers will be unloaded first, as long as the containers meant for A aren't significantly heavier, either individually or in aggregate, than containers headed for B and C, etc. The whole business with the economy flight was also probably related to some vague notion of reinforcing one's character, as well as a parallel with what life was like on board the boats and the importance of being solution-oriented and something about being able to imagine what it was like for the goods being transported in cramped containers, although the latter remained an unrealized possibility in terms of any actual usefulness. Note that as a rule of thumb, only 1/3 of the cargo should be placed on the deck, above the loading hatches. Most importantly, the heaviest containers should be placed furthest down; this is essentially no different than packing a backpack for a long mountain hike if you don't want to risk having a prolapse halfway to the top, only the problems here aren't the sort that can be fixed with a few months' physical therapy with a nice therapist and morning floor exercises (which look so embarrassing that you have to do them with the curtains drawn, but which really are effective); the impact on the boat is on the order of billions, running from scenarios where the heavier containers crush the lighter ones below them due to accumulated weight or making the ship too top-heavy (this has to do with metacentric height), which in turn requires the greater use of the ballast tanks to attain stability, which then means that most of the fuel you're burning is literally being used to move water from one place to another. Not to mention that a sufficiently dramatic storm can sink the whole boat. No one wants that. Nor do they want containers falling overboard, even if that sounds a lot less dramatic, just embarrassing. 90% of all goods that aren't bulk cargo are transported by ship, more than 250 million containers are shipped each year, filled with a cargo worth collectively 4×10^{12} Norwegian kroner. That a few hundred or a couple thousand of these are lost at sea each year isn't considered more than the cost of business. But each one is the source of endless nightmare and

very real PTSD for sailboats in the shipping lane, and involve their own special calculations and set of pernicious, unknown factors, such as whether the containers were intact or had structural damages when they hit the water, and what they were filled with. All containers are secured with rubber seals and have plywood flooring; it can take days, weeks, months before they sink. Stories abound of containers that crossed the Atlantic for 15 months before being washed ashore and opened by people who hadn't ordered anything. Whether or not the waves destroy the container walls depends on how well the cargo has been secured, but the cargo's contents also play a role; a container filled with smartphones or electronic equipment, each unit packed within protective layers of Styrofoam and inflated air cushions, can stay afloat long past the foreseeable future. They can cross oceans, partially filled with water so that only the top peeks over the waves. You'll never spot them on night duty at the helm, so all you can do is hope for the best and keep your eyes on the stars. This is all to say that the heaviest containers have to go on the bottom, at most ten in each stack below deck and ten above, depending on the boat's architecture and capacity and the weight of the individual containers. Note that not only must the heaviest part of the total cargo be placed furthest down, but each stack must accord with the weight hierarchy to avoid damage. When you've done this a while, you'll be able to visualize the different containers with your mind's eye, according to a color-coordinated system which, for practical reasons, coincides with the colors in MACS3 and takes into account differences in weight, height, contents, and destination. This gets easier eventually. One of his favorite things to do at Yangshan Port was to climb up one of the STS cranes on the pier and stare out over the ocean of thousands of containers and Hanjin, Maersk, MSC, CMA CGM, COSCO, APL, Hamburg Süd, K-Line, Hapag-Lloyd, Yang Ming, Evergreen, Wan Hai, HMM, and his own Mee-Kwon, all of which waited to be loaded on board in an explosion of colors. At first glance it all seemed like a random jumble, but if you looked long enough, certain patterns would emerge, color combinations would appear month after month, thanks to those shippers with synchronized shipping processes, or just a natural tendency to stand out in the crowd, like the off-white Maersk containers that were always being placed in the same place and in the same quantities and whose disintegration and degree of sun bleaching increased with each journey, or because of the unconscious tendencies of port workers to handle some containers in a subtly different way than others depending on the color, as if they could sense that these containers tolerated more or less than the others, which may certainly have been true. Sometimes the container port resembled clouds that took on the

shape of animals or objects as the containers were loaded onto terminal tractors and carried over to the cranes. It was like seeing a whole world being unpacked before being sent on into the universe because time here was coming to an end. He also knew most of the crane operators, who were all grateful for his concern for them and for all the questions he asked while standing behind them inside the cabin and watching as they worked, like whether they had neck pain from looking down all day, and how sensitive the joysticks were and how they ensured the containers far below them were appropriately secured to all four lifting points, and questions about what the operators would do in this or that instance. He asked them whether they'd ever wondered what was inside the containers. "Anything you can think of is inside of those containers," they said. He told them that didn't answer the question. They said it did. He said, "I'm Confuciused." Talking to them was like reading fortune cookies. Their annual wages amounted to two weeks' salary for him, which he earned primarily for having opinions on the running of the company. This truly bothered him, sometimes, to the extent that it kept him awake at night, which also bothered him because it made him all too aware that perhaps it meant he was one of these people who are kept awake by other people's misfortunes because that was the right thing to do and because it made him feel mostly better about himself for a brief instant, and not because he thought about actively doing something about it like one day out of the blue doling out generous amounts from his own pocket to the port workers or setting up a charitable fund in their name or simply voicing support for lower compensation for the board members and company leadership and higher wages for the seamen. Also: the doorman in the first building he'd lived in when he came to Shanghai had suffered from acid reflux which he (i.e. the doorman) did his best to hide, and whose noises and accompanying odor if you were in the immediate vicinity of the eruption stood in sharp contrast to the gaudy surroundings in the lobby, which made many people try to avoid contact with him when they came and went and were obliged to walk past him, partly because the reflux seemed to be connected to the somewhat awkward eagerness with which he notified people that they had a package waiting for them or that somebody had come in and asked for them, and partly because they felt that the reason they'd paid so much for their apartments in the first place was precisely because they wanted to surround themselves with quality and enjoy what they felt was their right to enjoy, and none of them exactly felt like someone's acid reflux was part of the package. Jonatan had often considered advising the doorman to try using antacids, had even once or twice been on the verge of taking an extra unopened bottle of Pepto-Bismol from his bathroom cabinet

and giving it to him on the way out, but each time the risk of being intrusive had stopped him, along with the thought that he was going to get mixed up in the doorman's private health concerns in a way that would require him to follow up and ask him from time to time whether he was feeling any better or how things were, and the hard thing about it was that he wasn't totally sure whether he was most concerned with helping the man or being proactive about the problem on behalf of the building and its residents, so to speak, and it was exactly his inability to answer this question for himself that made him uncomfortable and always made him put off bringing the matter up, because he could then tell himself that the main reason he hadn't brought the matter up was out of respect for the doorman and that the best thing he could do for him was to pretend like nothing was the matter, thereby showing him that there was absolutely nothing bothering him and nothing to be bothered by, period, and regardless everyone had their own troubles to attend to, even if it wasn't always apparent, and that was no reason for others to involve themselves in something they had nothing to do with and demand the matter be taken care of, with the drawback that it also made him wonder whether the essential thing here was the doorman's well-being or, more likely, his own need to present himself to the doorman as a tolerant individual in order to be, well, liked by him. Now, if the containers to destination A are so heavy that they *must* be placed below deck (which also means the massive loading hatches must be lifted away by cranes upon unloading), thus causing all or most of the cargo for B and C to have to be stacked above A, this means that B and potentially also C will all or partially have to be unloaded and loaded again at port A—this takes time, time costs money, and it has to be considered whether upending everything is worth it or whether it is better to place the heavy load headed for destination A on another ship or let the containers wait at the port for the next voyage, where the chances are greater that the weight of goods to destination B and C are closer to A, which therefore makes it possible to place the TEU for A above deck, and in that case what impact it might have for the shipper and on revenue if the transport is delayed by several months. Ultimately, these questions are all hypothetical, since nobody ever has time to wait, and you might end up disrupting the global economy or send whole countries spiraling into chaos by neglecting your delivery obligations. The boat is also a weapon. It was that one time when he was about 16 and they were all out sitting on the rocks by the shore, drinking incredibly stale beer that was well past its sell-by date and waiting for the right moment to walk over to the experimental reactor her father oversaw and which made that jarring sound every time it was started up, and

this was long before he and Ebba were together, but there had been that same crazy energy in the air around them and they'd spent the whole night out on that rock, drinking and belting the lyrics to the Smashing Pumpkins' "1979" over and over as the sun slowly lifted its eyes above the mountains in the east, detonating rays of the sharpest, white light in their direction. He'd felt incredibly happy and clear-eyed then, solemnly declaring that he, at least, would never end up in some office pushing papers from one pile to the next, and none of the others would either, just continually explode with life, and he'd looked at her and known, just somehow known, beyond the shadow of a doubt, that as long as the two of them were together, everything would be okay, more than okay. It had been impossible for him to imagine putting on a suit to go to work six days a week voluntarily, with a feeling that this was all as it should be, pouring effort into doing as good a job as possible at the office in Hamburg while still holding on to some of what, in that moment at least, felt akin to the happiness he'd felt that evening on the rock, when he stood outside the offices by the Binnenalster and received that call offering him a leadership role at Mee-Kwon in Shanghai, just as it had always been impossible for him to imagine that it would be 19 years since he last spoke to Ebba or any of the others. On the other hand, it had certainly been possible to imagine throwing up a little in his mouth each time he was introduced as somebody who was "in shipping." Here are some numbers to work with: Mee-Kwon Taipan takes 20,000 containers. Let's say that all the cargo for C and most of it for B can reasonably be placed in the lower half, with the cargo for A placed neatly and luckily on top. But the cargo for C is much heavier than the cargo for B, and A and C, as an inconvenient result of the inscrutable ways of logistics in this instance, may not be mixed with B to any great extent and will thus have to be stowed starboard. So, in order to keep the ship steady during the voyage, the port side's stabilizing tank has to be filled with 25,000 metric tons of water, which then means that the boat can no longer carry 20,000 containers, only 14,000. Assume also that the number of containers for A is much greater than the number going to C and that the A containers are worth more than the C containers, but the weight ratio between C and B (and to a certain degree also A) make it impossible to include all the A containers in one voyage, and that neither the C or A containers can wait and everything is precarious and that if it all cannot be shipped right now and with the same boat, next time the cargo will be offered to another shipping company, and before you know it the small margins have crept in and competition and the price of oil and the cost of wages all cause you to be in the red, making it necessary to sell off the boat. In his experience, the bosses of

most major container shipping companies were a rather unpleasant lot, billionaires from distasteful families. To put it in those terms. They weren't quite as rotten as the shipping agents, not to mention the owners of oil tankers and bulk carriers who often had blood on their hands that spilled all over the place when they took off their gloves, but there was a lot of very old money in circulation, along with stately, embellished, self-serving stories in the form of bootstrapping sagas from the days of steamships and poverty, followed by one spectacular investment after the other until the companies grew big enough to flatten all their competitors and attain a majority stake and acquire hundreds of subsidiaries, and the only thing left from those humble beginnings was the old black-and-white photos on the walls of the board room.

Mee-Kwon had a slightly different history, not only by being the first shipping company started by a person who'd never seen the ocean before buying his first freighter, John E. Mildenberger, born somewhere in the American Midwest in 1902, but also by being a shipping company that had, in the fulness of time, changed nationalities. Because of this relatively unmarketable story about the firm's roots, Mee-Kwon's offices in Shanghai and offices throughout the world were not adorned with large prints of old sailing vessels and oversized black-and-white photos from the years when Mee-Kwon's first two cargo vessels sailed proudly from San Fransisco to wherever they were required. The only brochure available in the reception contained a small, passport photo-sized image of Mildenberger and a few halfhearted lines about long traditions and the usual guff about trust and responsibility and the willingness to look to the future, and was covered in large color photos of gigantic container ships and a text that emphasized the fleet's capacity and technological advancements in order *to meet*, gasp, *the challenges of tomorrow in a competitive, sustainable way.* If you really want the whole story, you'd likely have to start working there and wait until some of the older gentlemen got drunk enough to pull out the internal saga of how Mildenberger had been head-over-heels obsessed with shipping as a boy, again, without personally ever having seen bodies of water bigger than Lake Michigan, but it hadn't stopped him from selling all his shares in Kohler Co. mere weeks before the crash of 1929 and using the money to buy (sight unseen) the 384-foot cargo boat *SS Shasta* which over the next 15 years pulled in solid $$$ on the tramp trade, primarily between Chile and America's West Coast but sometimes also between the Panama canal and as far north as Virginia. At the start of the 60s he expanded what in the meantime had become four ships to nine, with regular routes between the West Coast and Southeast Asia, and from 1967 a fleet of eight

completely new container ships and a lucrative deal with the American military for shipments of Chinook helicopters to Vietnam and Cam Ranh Bay. They weren't alone. There is a logical explanation for why standardized container transport began more or less in the 60s and paved the way for a global shipping industry: *war*. The only guarantee in life other than death and taxes. Consider also that reefer containers, used for refrigerated cargo, have to be placed wherever they can be hooked up to electricity, and therefore have to be the first TEU placed. Reefers are containers that generate the most revenue and are therefore given first priority when loading the ship. Remember too that containers carrying hazardous materials have to be kept away from direct sunlight, reefers, other containers with other types of hazardous materials, basically anything else whatsoever. And that containers with cargo that present a leaking hazard should be placed at the lowest level and monitored regularly. And so then, only three years after the old gentleman Mildenberger had gone keel-up and six years after he had handed his life's work over to his son, John Jr., the latter sold his 85% ownership share to a Taiwanese investment firm in a panicked fire sale in the stock market crash of 1987. The son defended himself by saying there was a certain logic in divesting oneself from the company under dramatic circumstances similar to when it was founded, and that, in any case, it was the right time to do it, not unlike when he, three years later, decided that the 18th hole at the golf club in Sunrise, Florida, was the right time to yell, *To hell with the ocean!* before blowing his brains out over the green and two other club members' shoes. No one wants to read that sort of thing in a company brochure. Important: reefers must also be monitored daily, the temperature checked and recorded. Remember that an ordinary TEU cannot be stacked on top of a 40-footer, but a 40-footer can, under certain circumstances, be placed above two 20-footers if the boat is built for it. This is what is called *Russian stowage*. Omitted from the official company history, in any case thoroughly rewritten, including the subsequent story from the start of the 1990s of how the major industry actor Mee-Kwon ended up in such a row with the other Taiwanese shipping companies (more specifically Evergreen, Yang Mai, and Wan Hai) that they took all 81 container ships to Shanghai and settled there instead, with a declaration (thoroughly detailed in the brochure) that it would henceforth be a more caring company than its competitors, with cleaner tech and bigger visions, even though most of the declaration would be forgotten over the years or met with resistance from certain quarters of the shareholders and the board, which eventually viewed it as little else than an old PR campaign and emphasized that all attempts to hold shop under such dogmatic principles were

naïve and incompatible with retaining their hard-won place as the world's sixth-largest shipping company, measured in terms of TEU capacity. Note: Ten containers can only be stacked on top of one another in each row if the TEU are of the type that allow it (far from all of them do) and if their total weight does not exceed certain parameters for the total weight limit for rows. Not everyone found the topic of international shipping logistics to be a stimulating source of conversation, it wasn't a good conversation starter at parties; he seldom went out anymore. The first office he was given in Shanghai, on the 42nd floor of the Jin Mao Tower, had contained a six-foot-long model of the company's newest flagship, *Mee-Kwon Mule Hill*, mounted on a polished granite table by one of the large windows. It had been the first ship of theirs with a capacity of over 10,000 TEU, and the model, which had clearly cost the company that specialized in building realistic models of such things both time and energy, and just as clearly cost the shipowners a solid chunk of money to have made, was put in his office both as a nice gesture and for the sake of inspiration, but equally because it was a fairly large affair that it would have been hard to find room for elsewhere, and because the model, if you walked around it and observed it from the window side (something very few visitors took the trouble to do), was marred by a gash in the hull on starboard side, as a result of one evening's festivities that took on epic proportions a few months before he came here, or by a reckless, even if remarkably meticulous cleaning staff's efforts, depending on who you asked. A new and not-entirely-with-the-greatest-of-care-glued-together copy of *Mule Hill* had since been placed in a glass case down in reception, where it was possible to move around the boat and study it from all angles without worrying about whether it will bring your cargo on time or not. Above deck, the stacks both fore and aft must not be too high, so as not to interfere with the line of sight from the bridge. Most seamen are more superstitious than the average individual, which also applies to the ship owners, which meant that no one wanted to scrap the damaged boat, even less to go through numerous, time-consuming rituals after having taken it upon oneself to actually throw the ship in the trash, so it was decided the boat would run ashore in Jonatan's office, where he, toward the end of a long evening's overtime with calculations and analyses stretching far into the night, in an attack of boredom, began tinkering with the boat and realized that the group of model containers on board consisted of around 5,000 glued-on units that could be broken off with minimal effort. When morning came, he'd loaded *Mule Hill* to capacity and created a color-organized container port in miniature at the meeting table in the office's north corner. Not to mention: If the boat is to sail near the

coast of Somalia or through the Gulf of Aden, the Arabian Sea, the Strait of Malacca, the South China Sea and other places where the danger of piracy must be assessed as Possible, even if far from as likely as it was in the 90s, containers with combustible and/or explosive cargo must be placed as far from the outermost sides of the vessel as possible and especially the stern side to reduce the chances of a catastrophic loss of ship if attacked by automatic weapons and/or RPGs. Based on the containers' various colors and logos, over the following weeks he created different systems in which each color could designate a container type or variables of cargo, weight and destination, and he discovered that the activity, which he did by himself during spare moments, of loading the boat in the most efficient manner (which included a number of calculations and algorithms worked out in advance, this was by far the most fulfilling part) gave him a peace and clarity almost sedative. A feeling of the harmony of everything. And even though he liked holding these tiny little containers in his fingers, he found it wasn't essential to physically load and unload the model ship each and every time and, as it were, simulate various ports of call to see whether the plan functioned in practice, it was enough to stand and look at the conference table where the miniscule containers stood carefully stacked (the meetings he'd been having at the office were for obvious reasons moved to one of the conference rooms further down the corridor or by him taking a taxi somewhere in town to meet people where they were) for a few minutes at a time, before consulting the printouts from the open stowage plans from the SimpleStow program in order to continue the work of adding color to the cross-sections of the cargo holds. Every container on board is given a six-digit number in the system, in addition to codes that indicate type as well as info about the origin and destination port. The first two digits indicate the cargo holds, bow to aft, where odd numbers mean the cargo hold is suitable for 20 containers and even numbers permit loading of 40-footers, the next two indicate the row in which the container is located, from the centerline out to either side, with even numbers aport and odd numbers starboard; the final two digits indicate the level from the bottom, always even from 02 below deck and normally over 80 above deck. Before you realize it, a number like 171104 is no longer just a number, but a mental picture, and if you're the captain and this container is to be unloaded at the first port of call, the reason why you'd consider throwing someone or yourself into the propellers. It takes an average of a minute and twelve seconds to load a container by means of a Liebherr STS container crane. Even more fun and fulfilling than sitting at a desk and putting colors to stowage plans was his attempts to do everything in his head, which he eventually

became quite good at. The trick was to study the miniature port or actual pre-stowage cargo lists long enough before lying down on the sofa in the office and visualizing the whole operation, later either snapping into place the miniscule TEU in the model's cargo hold as fast as he could or, in the case of real ships that had already departed, comparing the solution in his head with what the software had computed as the optimal solution. Without exception, the computer had better solutions, and it never made mistakes like leaving containers at the port by accident or placing boxes too deep, something that fascinated him more than vexed him, as did the fact that the computer needed only a few seconds to do an assignment he'd sat with for hours, and that it seemed incapable of being wrong to boot. Nevertheless, if the computer had been able to give him subjective and honest feedback, he felt fairly certain it would have told him it wasn't altogether unimpressed with the amount of numbers and information he was able to handle at once and how few errors snuck into his optimization, especially when he performed the stowage as a pure mental exercise without any physical contact with the containers. It wasn't that he believed himself incredibly smart; he was more a guy with too much time on his hands. He told himself the computer would look over his work and stammer something along the lines of *Not bad for a…human*, perhaps self-destructing afterwards. Note that the lashing rings on all containers placed on deck have to be monitored and, if necessary, tightened daily. Do not trust the ocean to respect the efforts of port workers. He would have also liked to ask the computer if it derived the same pleasure and solace from mathematics as he did, or if it was simply all it knew. It couldn't be easy being a computer, surrounded by so many people and things it didn't understand, with no conception of where it came from, before suddenly being awakened into life by a pimple-faced student with semen-soaked socks and unread textbooks within sight of the monitor, being asked to perform all sorts of tasks that it hadn't the slightest interest in. Stowage plans have an inherent weakness in that they are easy to manipulate. None of this is made better by the fact that most stowage plans are either transferred between land and ship on USB memory sticks or, remarkably enough, still saved on floppy discs and fed into 20-year-old computers on board the ship. A good many of these computers are also used for checking emails and surfing the web during free time. Obtaining access to all the plans is not at all out of the question for a modern pirate or a crime syndicate, either in order to locate specific cargo on board any ship you like or to change them, such as by hacking into the stowage plan software and wreaking havoc by instructing the port workers to load the ship completely out of the right order and cause serious

delays, either by changing the content descriptions of each TEU so that no one knows which container contains what, hence causing the 24-48 hours normally needed to load and unload to suddenly balloon into weeks because each of the 10,000 containers has to be looked at manually in order to find out what is in them. Not only can you hit the company financially; with a little effort, you can block ports and bring the supply chain of whole countries to a standstill. Or you can manipulate the weight of the individual containers and ensure that the heaviest cargo is placed on deck, or on one side, effectively gifting the port a 200,000-ton shipwreck you can be sure no one is going to sail around right away. Plus you can, if you want, overload one side of the ship at port and infect the computer with malware to hide the fact that the ballast tanks are already working at full capacity to keep the boat upright, and then, when the boat is in the middle of the Indian Ocean, sit and watch as the virus disconnects the ballast tanks so that whatever it is you don't want reaching land, ends up 4,000 meters deep, lost forever. Something else he got out of thinking about numbers generally, and performing mental Tetris on container ships specifically, was that his anxiety levels went down faster and stayed down longer than with a 5 mg dose of diazepam, and with fewer side effects, but he still sometimes got very tired doing it. Sometimes he wondered how he could be liked by so many while not liking himself at all, and if anybody really had self-awareness enough to like oneself just as much as their acquaintances did on average, thus attaining a perfectly balanced self-image.

Before Shanghai he'd been at Hapag-Lloyd, and for over a year before that he'd been at Maersk in Copenhagen, while still at university. The Maersk job had come to him completely by chance, at least he hadn't put any more effort into it than it had taken him to sleep with a rich girl he met at a lecture on algebraic number theory at the Department for Mathematical Sciences and who seemed to have a repressed caring-for-stray-dogs syndrome that led her to take him out in the city afterward, first to Pusher Street in Christiania, either because she thought he belonged there or just because she wanted to show him how free-thinking and open to alternative lifestyles she was, how much he could trust her and so on, and how she, after a lot of hassle and in an unbelievable clumsy manner (including an arsenal of woefully outdated hippie-speak) bought some weed she insisted they smoke together right then and there, among some trees by the big plot of grass; afterward she insisted that they wade/swim over to Kanin Island where she bestowed a rather bodily form of compassion upon him and said something to the effect the fact that his father was a hairdresser in Stavanger was *cool* and *okay* and *pretty awesome*, at which

point he realized she really didn't mean it, but wanted to be someone who meant it, and that what she was doing was consoling him without realizing that she was doing so out of pity because he came from a "less fortunate" family and that she sort of also looked up to him because he sort of came from nothing and was sort of going to be something, not that she meant it like that exactly, it was just that she came from *money*, as she put it, without there being anything the least stuck-up about her saying so, she said, and then she said that her father worked for Maersk and her mother worked for Maersk and her grandfather had worked for Maersk and that she almost certainly could speak to someone about something, if he wanted, because she dreamed about sort of blowing that company wide open and letting people in, not that she meant that he was some kind of representative for the underprivileged or someone who wouldn't fit in there, if he understood what she meant, or that she was a representative of the upper class, if he understood what she meant, just because, like, his father worked as a hairdresser and her father was a *major, major* moneymaking machine for Maersk, sort of, and he wasn't able to get many words in edgewise while she kept on arguing to herself, but he enjoyed her company anyway and continued to spend time with her over the next year, by and large without any weed or further escapades in natural surroundings, and when she arranged an interview with her father and a possible spot in Maersk's student program, he came in dressed as a sort of drifter on purpose, as if he'd used his last remaining money on a suit that wouldn't offend anyone, and apologized profusely when the one button on his suit jacket came off at the first handshake in the father's office, which of course decided the matter and made it possible for the father to bestow a much more professional form of compassion by pretty well pushing him to the front of the line before *Danish lads from the absolute best families* and into the Operations working group with whom he would work for the next three months before graduating and being picked up by a driver to be taken to the Maersk parents' villa on Lighedsvej where champagne and schnapps and canapes were waiting in celebration of his graduation and the offer of a jaw-droppingly well-paid full-time position in the father's division, with the father taking the role as mentor, an offer he accepted, and the girl was also there, even though at that point she'd actually found another guy who needed her something fierce or maybe it the other way around, but in any case she bestowed her compassion upon him one last time, on the second floor after dessert and afterwards took him to Lindevangsparken, where she watched as he drank beer and she just drank some *sportsvand* and mumbled something about maybe being pregnant or just really unhappy, but that neither of

those was his fault. The master's program in mathematics was supposed to take five years; he finished it in three, for it was at Dale he finally understood math and threw himself into it with a passion. A little under a year later he moved to Hamburg, not because Maersk hadn't been a good place for him, for it had, to put it mildly in fact, due in large part to her father who, unlike his daughter, didn't suffer from a repressed caring-for-stray-dogs syndrome or any other known conditions for that matter, but was just a square dealer who didn't care about anything other than ability and results, in a way that hardly seemed affected or calculated to put him in a favorable light as some kind of philanthropist, but seemed pretty genuine, and it was Jonatan Madland's evident ability and results that led the father to put him in contact with Hapag-Lloyd when a better position opened up there, when a comparable job was unlikely to come open at Maersk for some time, even driving him to Kastrup Airport and, yes, even giving him a hug and thanking him outside the terminal, neither of them saying a word about the daughter. As of January 1, 2018 these were the shipowner's four biggest ships in the T class, measured in TEU capacity, all of them built by Samsung Heavy Industries in Geoje, Korea: *MeeKwon Typhoon* (19,852 containers), *Mee-Kwon Taiwan* (19,666), *Mee-Kwon Taipan* (20,142), and *Mee-Kwon Taipei* (25,023). Hapag-Lloyd was an even better place to work, even without a mentor to guide him. He found an apartment in the old town that wasn't too big and was close to Ballindamm and H-L's offices, where he spent most of his time calculating efficiency improvements and capacity maximization before in 2005 becoming heavily involved in the TUI AG acquisition of the Canadian shipping company CP Ships to merge it with Hapag-Lloyd, which drew the attention of Mee-Kwon, which invited him to a meeting at Whitechapel in London, a kind of neutral territory for both sides, before offering him the role of Chief Innovation Officer (CINO) at the main office in Shanghai plus a place on the board. In number theory, the concept of a perfect number denotes numbers for which the sum of the number's proper divisors is equal to the number; the lowest number to show this is 6, which can be divided by 1 and 2 and where $1 + 2 + 3 = 6$. The next perfect numbers are 28, 496, and 8128. The seventh perfect number is 137,438,691,328. After this, they become rather extensive. Whether or not there can also be perfect odd numbers is, after 2,000 years, still up in the air, but he liked to imagine it was possible. After the first few weeks at a hotel in the center of Shanghai, he moved into the second floor of a house in a part of town that had earlier been the French Concession in S. and still by and large looked like a small slice of France's cake; he could freely bike around among small shops and restaurants, through maple-

lined allèes, and hear more birdsong than traffic noise, a whole other world than the megalopolis a few miles to the east, with skyscrapers and flashing neon lights and six-lane roads and one corporate empire after the other. Several others from the company leadership lived here: Jùnjié Bao, with whom he played tennis, the Chief Executive Officer who reported directly to Zōnghàn Fù; both Jīn and Yáng, who lived a few blocks away and across the street from each other, naturally, without it ever occurring to them to find it especially funny; Fù had lived here, but had now relocated somewhere on the other side of the river, and Qín also had an apartment around here somewhere, ostensibly, though no one knew exactly where nor ever said anything whenever they shared a taxi from the office and he insisted on being dropped off at random places along Changle Road under the pretense of having errands to do before going home to his wife (whom no one had ever seen either). Then there were the other foreigners: Volker Sorg, 41, from Dresden originally, with an appearance suggesting membership in a professional heist crew, complete with the shifty look that seemed constantly alert to the sound of the cops, and a subtle trace of sadness in the face, which in a movie would be a cue to the audience to sympathize with the character and wonder whether he dreamed of something entirely different from the life he currently led so that the big heist would be his last after which he'd find a nice piece of land in South America or something like that; Sorg had come from Hapag-Lloyd at Jonatan's urging in 2010 and always kept close to Jonatan whenever anything difficult was being voted on in the board, often leaning in toward him and whispering, hoarsely and uncertain: "What do you say? Is this the right way to go? Is it really?" Jan Fonda, from Groningen, was Dutch-Italian, branded with a name that forced him to undergo the same jokes just about every time he went through the passport check or introduced himself, and regularly received mail with feminine titles in front of his name. To be sure, his grandfather had been involved in the 1930s with the Afsluitdijk in the Netherlands, which people were always forgetting what it was and were impressed every time he explained the concept, sometimes by way of diagrams and always with the unnecessary intro: "Imagine a country that lies very, very low and right next to the ocean." The other foreigners on the board, the Japanese members and the guy from Hong Kong (he insisted he wasn't Chinese), lived in different parts of town, and then there was the American from the Midwest who refused to live in Shanghai, instead flying roundtrip Milwaukee → Dallas → Hong Kong → Shanghai once or twice each month, always in first class because the Dallas-Hong Kong stretch alone was close to seventeen hours, which pushed Mee-Kwon's annual travel budget for Mr. Meyer up to around

50,000 dollars, but also gave him a lot of frequent flyer miles from American Airlines. The idea seems to be that if you just give it long enough, everything that *can* happen *will* happen, because the theoretical limited total of configurations in which atoms can be conjoined to create something meaningful has a number, and this magic number is $10^{10^{80}}$, which is still a hundred trillion times fewer than a googolplex, the limit at which things abruptly stop making any sense whatsoever for anyone other than professors in particle physics who like to point out that even a googolplex is an insignificant number next to G^{64}, whose size alone quite literally, without the slightest trace of metaphor, would make your head collapse into a singularity if you were able to visualize it, which then also means that $10^{10^{80}}$ is no greater than the point where you should assume anything can happen at any time, yet also a big enough number to make you realize you ain't seen *nothing* yet, you're still in for some surprises, and not all of them pleasant. What it boils down to is this: Everything has a nonzero chance of occurring. Whether anyone has time to wait that long is of course an entirely different question. From the deck of the *Mee-Kwon Taipan* (which of course was no deck in the usual, comfortable cruise ship sense, accompanied by deck chairs and people with white gloves who took your drink order and spoke in muffled, exotic accents), Yangshan Port resembled something Mondrian could have painted. The only reason he knew of this artist was because his mother had hung up a poster with one of his paintings in the kitchen when he was 14, and he walked in, looked at it, didn't like it one bit and said *I could have painted that in five minutes*, and she didn't even look up from the pots and pans to look at him, just said, *Maybe, but he beat you to it*. By the way, since no boats set sail for a home that's halfway around the world with only ballast, remember that you have to plan for X number of new containers that are to be loaded at ports A, B, C, D, and E as well as make sure they don't interfere with the unloading of the original containers and cause delays and unnecessary expenditures. If you remain at the port longer than is strictly planned for and necessary, you'll delay and push back not only your own dates for delivery, but also all the other boats that are in line for unloading, causing both pandemonium and legal liabilities. But relax, you'll soon learn to love all this. Just give it time. The algorithms will take care of most of it, regardless. None of the board members or top company leadership in Mee-Kwon had ever been on board one of the container ships for any reason other than for looking around and having their picture taken while they pointed at things. None of them quite understood, either, why he'd requested three months' time off from all his board duties, just to spend 30 days on a boat which, past Hong Kong and

Singapore, would not stop before reaching Le Havre, Felixstowe, and finally Rotterdam. Bao had even put down his tennis racket halfway through a practice match and said to him, severely: "There's nothing to do on a boat if you're not working, Madland, do you understand that? *Nothing*. Weeks and weeks of it." Not to mention: One day container ships will get even bigger. Big enough to carry 50,000 TEU. New ports will have to be built. Again. The bottom built deeper. Again. Suez, Panama, deeper, wider. New cranes will have to be installed in order to load bigger boats, deeper cargo holds. These cranes will be automatized. And the last port workers will put down their gloves and leave the port for the last time. Deepwater ports that can take no boats greater than 30,000 TEU will lose all traffic and cease to exist, the areas taken over by apartment blocks, shops. The same will happen to the shipowners, those who remain when the conglomerates that have vacuumed the entire market will have nothing to ship. Maersk, MSC, CMA CGM, COSCO, maybe Hapag-Lloyd. Maybe Mee-Kwon. Everything else will be split up. And the crew will be able to work from home, apart from a custodian or two on each boat, for a few years at least, till they too sign off and the boats sail over the oceans alone, operated from offices, impossible to hijack since no one will be left on board to threaten. The boats, half a kilometer long, 20 containers high above deck, will pass from continent to continent, through storms and still waters, past humpback whales and over sharks, too big to draw the curiosity of the dolphins; over the Pacific and the Indian Ocean, the Atlantic, through Suez or around Cape Horn if necessary, through the Northeast Passage when the ice is all gone, the boats will experience all this, along with sunrises and sunsets, and not tell anyone what they've seen, but sit quietly at dock and let the robotic cranes take care of the rest. Then they'll turn around and head home, without a word. They'll be like cities with no people.

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The sound comes from far away, blaring like a foghorn. It barely registers, just a part of the surroundings here, something new to accept, before it becomes so invasive that I have no choice but to pay attention to it. Everything is dark. There's just this sound that won't let up, but grows, grows in intensity. I crawl out of sleep while the sound fills the room and I realize it's the alarm clock on my phone going off, I must have overslept, it's the last day, just a few hours before I'm to give the "Below the Waste" talk to the entire conference and my schedule up until then is stuffed to the gills. Last night I put my phone on the desk, not next to me as I usually do, to make sure I'd fly out of bed once the reveille let loose so I could get ready in time to have breakfast

with the others. Only it's not the alarm. The sound changes again, becoming more melodious, but also more insistent. I'm halfway between the bed and the desk, wrapped in a corner of the blanket to keep warm in the chilly room, before I realize the sound is from someone calling, the phone vibrates and flashes as I look at the display, where the clock shows 6:05 and an incoming call with an area code of 8816, which tells me absolutely nothing.

"Hello?"

Background noise and a couple of weird screeching noises.

"Ingmar? Is that you?"

"Who is this?"

Long pause.

"Hello? Who is this?"

"Can you hear me?"

"Who is this?"

Another pause. "Jonatan here."

I'm completely dazed. I stumble my way back to the bed and sit down.

"Jonatan?"

"Yes. Is this a bad time?"

"No," I stammer. "No, no."

"Good."

Neither of us says anything for a moment. I'm not sure what to feel. To hear that voice again after all these years. It's as if I can smell his basement room again, where we used to hang out.

"I wasn't even sure if I should call you," he says. "Didn't have very many I could call."

"I find that hard to believe."

"Wait a second—*No. That's not what I…goddamn it, just tell them 我的氣墊船充滿了鱸鰻. Fine.* Sorry, I'm back."

"Okay."

"What?"

"I didn't say anything."

"Sorry, delay on the line, I'm calling from a satellite telephone. Standing on the deck."

"Where *are* you?"

"That's not a bad question," he says in the same old voice now. "If I had to guess, I'd say somewhere in the vicinity of India, though 'vicinity' is pretty relative out here. But I'll probably see India next, yes."

"Are you on a ship?"

"A kind of boat out here. I'm on the way home. I mean, back. To Stavanger."

"From where?"

"Shanghai."

It's like I'm still asleep, nothing seems to make any sense.

"Not the quickest route, exactly."

"This boat'll just take me to Rotterdam. I wasn't prepared for how bored I'd get on here. It's like being eaten alive. If you look at the clocks long enough, they start to go backwards."

"And is that why you called? Because you're bored?"

"I mean, the first few days were fine, but then…" He cuts himself off, and then it's as if it all hits him, full blast. "I can't believe I'm talking to you."

"I tried calling you a few times, those first years you were in Copenhagen," I say, but this doesn't seem to come through.

"Do you know what I'm seeing from my window?"

A part of me just wants to hang up, crawl back to sleep, and chalk it all up to a dream. But I go on: "The ocean?"

"Containers, Ingmar. And on the deck: containers. From the bridge: containers. Imagine a whole month of this."

"Sounds pretty monotonous," I reply, uninterested, sad because he still hasn't apologized for the fact that he just disappeared and I never heard from him again.

"But when you stand on deck, or at the bottom of the cargo hold and look up, row upon row, ten floors high…it's a mountain of goods, Ingmar. I should have taken mountain climbing gear so I could stay in shape."

"Why are you on a ship near India?"

"I'm working for them. Mee-Kwon. A Taiwanese shipyard."

"So you're a seaman?"

"I'm on the board. Or was, I don't know. I've asked for a few months off. Have to go to Stavanger for a while. Are you there now, or?"

"Nope. Been living in Finland the past decade."

"You live in Finland? What in the world are you doing in Finland?"

"Working on the storage of radioactive waste."

"Oh," he says and falls silent. Then: "We got ourselves some real grown-up jobs, then. What about Ebba?"

"She's here."

"In Stavanger?"

"No, with me."

"So you two are…"

"Correct."

"Got it. Wow, so…how long?"

"17 years now."

"And…?"

"Two, is the answer to that question. A boy and a girl."

"Wow."

"That wasn't *that* hard."

"It's not, no. Just a little surprised, is all. Or, maybe not."

"How are you doing, exactly, Jonatan?"

"Has it been a long time since you were home, Ingmar?"

"It's crazy you're calling, actually, I talked to a guy last night who mentioned your name."

"In Finland?"

"Warsaw. I'm here on work. An American who apparently is related to Mrs. Blom, he said she'd talked a lot about you and Peter. Do you remember her, Jonatan?"

Silence. I can hear him thinking all the way out there on the ocean.

"I remember her dog. What was his name? The guy you talked to?"

"Cecil Bjornsen."

"Sissel Bjørnsen? That lady gym teacher from third grade?"

"C-e-c-i-l. Bjornsen without the ø."

"This a guy you know?"

"Never met him before. Met him on the street, he's at the same conference I'm at. From Minnesota, apparently."

"And he just mentioned my name out of nowhere, you say?"

"I told him I'm from Stavanger, he said he had relatives there and her name was Blom and she lived at Forus and he'd been there a few times visiting her."

"So what does that have to do with me?"

"Don't ask me. But it seems like Mrs. Blom's strongest memories are all about *us*. Maybe because she probably got her hair done by your father like everyone else. I really don't know, could be he was just trying to impress me with his knowledge about the area, but he was quite specific, like about her telling him how Peter and Jonatan and I had spent time in the industrial park, stuff like that."

"I see."

"Apparently she lives at the nursing home now, Mrs. Blom. The Lighthouse. Remember?"

"We need to dig it up again. I'm on the way back now to dig it up. I need you, Ingmar."

Now I'm really angry. He has no idea what he's about to stir up.

"No," I say flat out. "That's enough now, okay? You got that? We were teenagers, Jonatan, I was only trying to help you. You need to let it go."

"Can't."

"But if you need to talk, I'm still here for you, I've always been your friend, always will be. Get to the port, board a plane to Finland, you can stay with us as long as you want."

"It's not that."

"Then what the hell is it?"

"We have to move it, Ingmar."

"*Why?*" I ask slowly, exasperated. I thought we were done with this.

"Don't you read the papers anymore? They're considering shutting down the nursing home, it might have to be demolished. They've done measurements, the area is probably radioactive. Don't you follow the news?"

"I sure as hell don't read *Stavanger Aftenblad*, if that's what you mean. And why on earth would you?"

"They're going to come in with heavy equipment to level the place, turn the whole property upside down, Ingmar."

More silence. He's waiting for it to sink in for me. I'm waiting for him to admit he's not well.

"Are you sure you're okay, Jonatan? Are you really on a ship?"

"I've made a mistake, Ingmar."

"I get it. Maybe you should talk to someone again?" I say, my impatience rising again, along with my worry for him.

"I'm not so sure about that. But I needed—okay, so you asked whether I've spoken to a psychologist. The answer to that is, there aren't very many psychologists left I *haven't* spoken to, it feels like. Do you realize how exhausting it is to try and put yourself out there so someone can help you, while at the same time, every single second, being aware that I have to put on an act and *not* actually put myself out there, because doing so would bring on a mountain of medicines that would put these container mountains to shame, and that's actually the least of it. These people, Ingmar, they earn their living off drilling all the way into you in until you've no resistance left, that's their whole business model. They've spent years, literally years practicing how to break down every barrier you've put up to defend yourself all the way to your unconscious. What they do, what they've been programmed to do, is go around your house, smiling all the while, trying each door again and again, at different times and in a different order, because they know it's only a matter of time before you forget to lock one of them or leave a window open because you wanted some fresh air. Metaphorically speaking, that is, this house. They can sniff out one drop of evasiveness in a thousand cubic meters of honesty. And if they find one crack, even the smallest little opening, they'll keep on pushing and pushing until they're inside, where they force you—in a way that makes it seems like it was your own idea and something they're only too happy to applaud—to pull aside the curtains and throw the doors wide open, and keep them open while you carry all your furniture out to the driveway so that everything is exposed to the light of day, so the two of you can look at it all and throw away anything that's no longer needed, repair what's broken, and furnish that house all over again. I'm still talking metaphorically, right now. So yes, I've gotten help, but you have no idea how much I've fought to get help by conjuring up another person with other problems than the real ones, all in order, in a roundabout way and in a sort of parallel manner, to adopt some strategies—while also avoiding being immediately committed and put under heavy sedation—which would also prove to have some justification for the actual problem, after the fact. I don't know if you're still there, Ingmar, but if you visit a psychologist and start telling them how you once went into a house as a teenager and all that happened inside…"

"But…what if it's just not *true*, after all, Jonatan. None of it? I need to know you're able to think this all the way through."

"Yes, what if it isn't, Ingmar? Ever heard of Alfred Blom?"

"No, who's that? Mrs. Blom's deceased husband or something?"

"What about Ingar Poulson?"

"Never heard of them, no."

"But I have. I have, now."

"Would it help if we both went back to Forus and looked at the house again?" I ask in as friendly a tone of voice as I can. "I can meet you in Stavanger, I can arrange a couple of days off for it. Or in Rotterdam if that's better for you, we can go back together, talk. I think it'd be good for you to see the house again."

"You really don't get it, do you? They tore that house down ten years ago, it's a parking lot now. Or a repository for a recycling company, I'm not quite sure. Someone just needed the place, I guess. Even though they left a lot of other things in the area. But I made a mistake. I, what should I say, I left a door unlocked one day. Not to someone in the health services, exactly. A couple of colleagues, is all. I've known these people for years, just needed someone to talk to. There was alcohol. A fairly large amount. But I think what I said may have, you know, *gotten further*."

"In other words, you forgot that the last thing you should say when you don't want somebody to pass something along is, 'Don't let this get any further?'"

"Something like that."

"Got it. But you forget that everyone who does that risks getting more questions, because the obvious issue is whether they actually believe what you told them, and if they don't, why they don't seem more worried about, you know, whether you…"

"Are crazy?"

"Exactly."

"One of the workers on board has only worked for Mee-Kwon for three months, should I worry? He's Chinese. From the mainland."

"So how did your good colleagues react when you started going on about what is in essence a magical stone that allows you to experience multiple lives and so on?"

"'Worried' is probably the best way to describe the immediate reaction. But then again, the problem isn't what you tell people, but what people go on to tell others, and to whom exactly, what gets left out and what gets added along the way. A chain reaction occurs, but it's totally uncontrolled and impossible to predict. It's not that I don't trust my friends I may have let my guard down to, nor even that they were clearly worried about me and asked if I hadn't been under too much pressure of late and if there was anything they could do or anything I needed and all that. About like what you're doing now. And it's not that I don't think these folks haven't got friends of their own who aren't super nice, upright, brimming with integrity and so on, but that *their* friends, and the friends of their friends and whomever they end up passing along what they've heard to. It's just that somewhere along the line you get to someone with bad friends."

"So, if I understand you right, you're saying that you wonder whether anyone can have told Chinese intelligence that you're not quite well?"

"You can make fun of it all you want, it doesn't matter."

"I'm not making fun, it's just such a stretch, is all. I'm sorry."

"I thought you said you'd been sought out by some guy you didn't know last night, who'd been to Forus and mentioned my name and that house."

"He didn't mention the house specifically, I think. That was unpleasant, yes, the fact that he knew someone who remembered us from back then and had talked about us. But in a way there was also something, I don't know, just curious about the whole thing? All the coincidences and such. So even though it made me uncomfortable, I can't—now in the daytime—imagine how you telling someone in Shanghai about certain experiences you had as a teenager could have had anything to do with an American who happened to know someone who got their hair done by your father. Plus, as I mentioned, he was American, not Chinese. *Big* difference."

"All the intelligence agencies spy on one another. That's their main function."

"Yes. Okay. Fine. I don't know what else to say, Jonatan."

"Tell me you're coming to Stavanger."

"I'm not sure whether—aren't satellite telephones traceable, not to mention cost a fortune to call from?"

"Traceable, yes, interceptable…I don't think so. Something about triple encryption, we use them on these boats all the time."

"If we're going to be all paranoid in the first place, I mean."

"They're going to tear down that whole damn nursing home."

"Maybe."

"And do you remember…that time, I don't quite remember when it was, it could have been, had to have been that fall, I think, fall of 95, somewhere in there, and we'd, God knows where we'd been, but we were on our way back to my place, and we had our bikes, you, Peter and me, but Ebba didn't, so she sat behind you, turned to the side I remember, like on horses in the old days, maybe it was one of the few times she wore a skirt, I don't know. And we were on our way back to my place for the evening, and Peter and I biked up ahead while the two of you followed behind, and I could hear you talking, laughing together, and all the way up that endless hill in Gausel, you remember how long it was? The whole way up I made sure to pedal just a little bit faster, increasing my speed just a little bit the whole time, and while Peter and I went on, the distance between us two and you two increased, you had too much weight on that bike, you couldn't keep up, but you tried as best you could and all I wanted was to tire you out so you wouldn't be able to talk to her. I wanted you to make yourself earn it."

"I remember that. I thought I was just out of shape."

"Come back, Ingmar."

I sigh. "All right."

"I'll call you once I get to Rotterdam in nine days."

He hangs up and the sound of the ocean vanishes.

"Already, sir?" The receptionist at Hilton Warsaw City, who over the past few days I've heard speak Polish, English, French, German, and Spanish without batting an eye, and whose general presentation is unnervingly polished, displays an impressively subtle balance between a mild personal disappointment and total and absolute compliance concerning the fact that at 8:35—and only ten minutes before the first conferencegoers show up in the auditorium, ready for the first presentation on the last day—I wish to check out a whole day earlier than on my reservation, which makes it necessary for him to get to work on what at all hotels with a certain number of ★ always looks to be a hopelessly frustrating endeavor to get you out of the system, which involves a lot of speed typing on the computer to gather up information on unpaid bills, deactivate key cards, get printouts of receipts and put it all in an envelope whose contents paint a very clear picture of who you've been the past few days, and he does it with a transcendental level of focus

on the screen and an expression that says *if you disturb me now, I'll start again from scratch and we'll be here all afternoon.*

To avoid running into anyone from the conference who might ask why I'm leaving or insist I give my talk as planned, I don't ask the receptionist to arrange transport to the airport, which would mean having to stand and wait in the lobby, instead taking my suitcase out to Grzybowska Street and walking a couple blocks east, where the street is lined with hotels and it's not hard to hail a taxi at a time of day when most people are already where they're supposed to be.

During the ride to Okęcie, I call my Onkalo colleague Janne and tell him I woke up this morning with a fever and accompanying abdominal trouble he won't want to hear in very vivid, retinal-image-inducing detail and that I'm therefore having to take an earlier flight home, adding that I've left a copy of "Below the Waste" at reception and ask him to give it for me after he's informed the conference organizers about my indisposition and desertion. He's read it before and knows what's there, having taken part in most of the research it deals with anyway. "You'll do fine," I tell him.

And then I wait. All day. In the terminal, on uncomfortable chairs, by the windows as plane after plane lands and takes off, in the shops and in the bar, while the clock inches toward the time when the first and best flight the lady at the counter could offer without plunging me into financial ruin will take me to Helsinki via Poznan, before with some luck I catch the last train of the day toward Pori which goes first to Tampere and takes all night. It's okay, though, I'm remarkably calm. More relaxed than I've been in a long time. I know where I'm going.

Then I call Ebba.

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Before we had clocks there were only voices. The voices ruled time and belonged to our mothers who called us in for the evening, with a varying degree of volume and temper, and their voices always found us in the end. They carried further than the deep voices of our fathers, who only seldom took on the job, especially my father, who under all circumstances would have preferred never to see me again if the alternative was the indignity of standing outside howling out into the dusk in the general direction of wherever he assumed I was. Our mothers stood on the upper steps and called our names at the top of their lungs (sometimes including the surnames, if it was right

before they called the police), with one hand on the doorknob as if to show the neighbors that they knew full well they were letting all the heat out into the dark of early fall, or they stood by open windows and curtains billowing in the evening summer breeze, or they stood in the gardens, by the hedges, by themselves or with two or three other moms as they each took turns shouting, each with her own unique tone, sustained by resignation and love, irritation mixed with worry, each of them distinctly recognizable to us, a whole language in just one word, so that even when you didn't hear it the first three times, one of the other kids might pick it up and tell you *your mom's yelling for you*, often with a poorly concealed grin and a nod in the direction of the sound, even if this person usually received a similar summons before you'd even had a chance to leave, and most of the time we simply stopped what we were doing and went home together, as after a day's work, and even if it was always accompanied by a certain embarrassment to hear your name broadcast over the neighborhood in that way, especially on evenings when, for various reasons, you were the first one called in, sometimes long before anyone else was, in which case you had to turn away from whatever you were doing and go home by yourself to the gradually diminishing sound of fun still being had behind you, it was still a kind of honor to hear your name ring out among the houses, through the streets and playgrounds, and into the woods, because it meant that despite everything, you had a place where you belonged, you were wanted. Some people had no one to call for them. There were always one or two who didn't. We envied them from the kitchen windows where we could see them still playing, as we ate our supper with monotonous jaw movements and complained to our parents that they treated us like little kids, which of course we were, even though we'd spent all afternoon trying to forget it, though we were still big enough to understand the flaws in our arguments and that there was something to be said for our parents' explanations of why some people came inside and some people stayed outside which would take us decades to fully understand. By the time we went to bed, it was so dark outside that we couldn't be sure whether they'd gone home or whether they were still out there. We didn't know what time it was, never knew whether it was early or late, only that the day continued unwaveringly up until your name was called, and whatever happened after that, it wasn't time at all, just this thing called *night*, and as long as we could remember we'd been told the whole town would be asleep by then, so it wasn't anything we needed to spend any energy thinking about. Not until we were big enough to get watches for our birthday and worries enough

to lay awake at night studying the digital numbers that relentlessly changed in the artificial, blue Casio light, could we understand that there was something that had been hid from us all along.

As long as those voices regulated the hours, each day had seemed part of an endless repetition, as if time was one of those pretend television toys many of us got for Christmas, those garishly colored Fisher Price plastic things with a screen and a knob you could turn round and round to your heart's content before enjoying a couple minutes' experience of a jungle landscape in motion or something along those lines, accompanied by a nerve-wracking, low-quality pling-plong tune that slowly drove our parents up the walls. You have to remember that this was the 80s and only the ultrarich (along with, strangely enough, the most resource-deprived) had cable television at this time, while the vast majority had only one TV channel where 98% of the programming was geared toward our parents, who seemed to sit glued to one weird informational show or avant-garde television theater production after the other, with a mixture of irritation of despair, determined like hell to watch until the end no matter what, so as to not become one of those who threw in the towel at the first sign of difficulty or complexity. The Fisher Price screens, on the other hand, let us watch what we wanted, when we wanted, and I probably wasn't the only one who didn't realize at first that the windup toy screen wasn't a real television, but only a latex canvas that went around and around as long as the windup coil had enough residual energy (a discovery we made only once we'd reached that age where that instinct kicked in to take apart all of our toys). The point is that as soon as our parents made the mistake of giving us real watches, and after we'd found out how they worked and therefore stopped blindly obeying their voices when they called out for us, once we'd understood we could compare the sound with what we saw on the displays and take our time a little on the way home, we also learned that not only did the day run its course, but that time did too, never to come back, including at night, even though we lay perfectly still and held our breath underneath the sheets, with our eyes on the display that just wouldn't let up, but pushed and drove each minute into a completely different sort of darkness we'd never be able to reach.

That was my worst defeat, to realize that time was never on our side.

And we got older. At first we didn't notice, but when we finally did, with the birthday parties finished and all the guests gone home, after our mothers had vacuumed the last few cake crumbs from under the long table, wiped all the chocolate streaks left by children's fingers off the chairs, after our uncles and aunts had come by and given us our presents in exchange for three or

four cups of coffee, presents that never contained exactly what we wanted, only something that vaguely resembled it and was clearly the result of a misunderstanding or a dimly understood notion of what it was we were interested in, then we couldn't get older fast enough. The problem was only that it applied to everything and everyone else too, and we would never be able to catch up with them. I remember realizing that my father didn't stand on a wobbly ladder to paint the house simply because my mother wanted a new color, but because the house needed painting, it was necessary to protect the woodwork.

I also remember using my first wristwatch to measure the time it took to do just about everything, everything that could be timed and divided into smaller units, and that it somehow felt like I'd be able to uncover all the world's secrets by timing them and recording the results in what I regarded as a very grown-up and sophisticated system of columns and diagrams I drew up on notepads my mother had taken from work (something my father disapproved of, believing himself a champion of the idea that office supplies and home supplies were two different quantities, and that if everyone did like her and helped themselves to what was in the work closet for their own private use, most businesses would have no choice but to raise the prices on goods and services to protect their bottom line, to the ultimate detriment of the consumer, that is, us, thus in the long run making us pay for far more office supplies than what she'd arrogated for herself, ergo, it was more cost-effective to go to the stationery store and actually buy what you needed instead, if the morality of the thing weren't reason enough to make her do that in the first place). I measured how long it took to walk up the stairs from the basement all the way up to the loft and down again, how long I could hold my breath, how long it took me to urinate after I held it in as long as humanly possible; how long it took me to bike all the way home from school if I pedaled as hard as I could and didn't use my brakes going downhill and didn't stop to look both ways down by the intersection after the small patch of woods, but simply took my chances that no cars were coming just as I came flying out of nowhere from the trees like a projectile and the two seconds it took to cross the street before leaning into a sharp curve onto the sidewalk and keep on going to the right and then immediately again to the left, all of it an unbelievably thrilling exercise I'd never dare say anything about at home, no matter how astonished and proud I was at how fast I was able to get home; I investigated how long it took for my brother, Odd, from the time I woke him up until he was capable of saying anything, and how long it took him to get dressed; how long my mother took on average to make dinner, my father to drink his coffee in the

morning, how long it took a beetle to cross the driveway, how long I could spin around on the chair in my room without getting so nauseous that I could no longer look at my watch, the time it took my father to go back to his usual mood after he'd slapped me for some reason or other and how long it took until I just about didn't feel anything anymore; how fast we could run from the house and up to the slope between the trees on the hill and how long it took to mow the yard, empty the bathtub, eat dinner, the time it took from hearing the sound of the helicopters coming home from the oil platforms in the North Sea until you saw them, how long I would need to run as fast as I could from my house to the run-down air raid shelter in the forest behind Forus Industri, in case war broke out or something else terrible happened.

Apropos of time: Only once did I ever visit my father at his job, the place where he spent whole days by himself for more than 20 years, without a single colleague to check in on him, without a single customer with whom he was on a first-name basis, at an office in a module-based storage building of the most pragmatic variety, with the name *Imperial Import* sloppily screen printed in block letters too closely spaced together on an oversized plastic sign hung above the door. It was a Saturday, and I accompanied him as he went to pick up some papers he'd forgotten, as I was too little to be left at home by myself, I think. I don't know where my mother was that day, perhaps out with Odd or something, and my father took me along in a manner that seemed calibrated to show unwillingness, with little groans and expressions of impatience, as if he had to show my mother—projected through me since she wasn't there—that this was something he could have gotten out of the way much faster if he hadn't had to drag me along. It may also have been that he simply didn't want me to know where he worked. He said nothing during the ten-minute drive to Sandnes, and I didn't ask any questions, as I knew how angry he could get if I started to pipe up; I just trotted after him once he'd parked in front of the building, so the door wouldn't slam shut before I'd managed to enter the building, thus making me lose sight of him, which would also certainly have caused me to cry so that when he, at this point irritated as hell, had to come back and let me in, I might find myself in "a world of trouble," as he often said when things weren't going as he wanted.

The day is also a good example of how the most seemingly insignificant incidents are those you remember most clearly, while the more obvious crown jewels of memory, like that trip you took with those people where everyone agreed on the last evening that the past week would

be a truly unforgettable memory to look back on when we were older, always seem to get wiped out of the brain's archives within a few years. But this day, this Saturday with my father, seems impossible to get rid of.

So, from this anonymous locale, my father handled the import of nothing more magical than an assortment of hydraulic and pneumatic quick connectors and valves for use on the oil rigs and in big construction machinery. Up until that day, when I finally got to see where he worked, which in many ways was the closest I ever got to understanding what went on inside him, I'd been very impressed each time we came across a dump truck or steam shovel or bulldozer and he said something like, "Without folks like me, those machines would just be standing there, not doing anything." But I can also remember the pang of disappointment that came over me when I stood with my hands in my pockets and looked at all the boxes stacked up to the roof in the storage room, as I heard him give a stifled curse in the office, where he was desperately searching for the papers he needed. The small objects inside the boxes, made of zinc-coated steel and brass, didn't look all that important, more like the weird thingamajigs you could buy at any hardware store. That was when I understood that this was all he did, that instead of single-handedly fixing anything or making sure all those big machines and the oil industry kept running, all he could do was hope someone would come by and order enough of these thingamajigs that would enable him to take home a decent paycheck from his company each month. It wasn't like Jonatan's father, a hairdresser who had his own salon in the basement, where flashy color photos of beautiful, smiling people were hung on the walls, where the smell could only be described as oddly grownup, and where people—according to Jonatan, and I had no reason to doubt him—*had their lives changed.* My father's workplace I remember as drained of nearly all color, without even a flower on the windowsill or a calendar on the wall with an inspirational picture of a landscape, for instance, a flowery meadow with mountains in the distance, which might make the weeks go by more pleasantly and even bring a subconscious, positive sense of expectation for the picture that would reveal itself on the first day of each month; the whole office seemed characterized by pale shades of blue and green that could easily have passed for grey, with dust everywhere, not just little wisps here and there, as if one pass with the vacuum cleaner would do the trick; it was more a thin film coating everything, almost like a town covered by a fine layer of ash after a volcanic eruption: it was easy to tell those items that hadn't been touched in years, weighed down as they were with dust, from those that likely earned him a regular turnaround, since I could see

the relatively dust-free stripes on them, the tracks his fingers had made as he picked up boxes for shipping or stocked his shelves with new supplies.

What's hard to imagine is how my father could have had any genuine interest in any of this, that it was a job he did out of passion. As far as I know he didn't care about oil production any more than the average person did, going no further than a modest fascination with the big sums involved and the national prosperity it ushered in, and likewise outraged over the local prosperity generated for the unpleasant snobs in the villas along the fjords who showed a level of nouveau-richedom it was just as hard to accept as to take seriously. Nor can I remember my father being especially interested in construction machinery, seeming actually bored when I, for example, wanted to stop and watch one of the excavators being operated, and aside from a remark that it was it was to his benefit that they worked, he had almost nothing to say about them, nor did he seem to know much about the different types, models, or how they worked, beyond what was apparent to any observer. For instance, I remember being eight or nine and watching a dump truck which—much too slowly for my father's liking—was being filled with the rubble from rocks dynamited to clear the way for a new factory building down by the tracks, and asking him how many tons he thought the dump truck could hold, since to me it didn't look like there was any end to the amount it could carry. "Quite a lot, probably," was my father's very knowledgeable answer. Followed by, and I remember it seeming like he was saying it just as much to himself, "But without those spare parts I supply, sooner or later it wouldn't carry more than an eggshell."

It's not inconceivable that my father just didn't care about the products he sold. Maybe he was satisfied with having found a niche where he could make a solid living. For all I know it never about what he sold, but the just the thought of running the business, keeping the inventory, and holding the business in the black that drove him. It's easy to look down on him for this, I know I was often guilty of it, anyway. But just as it wouldn't be right to present him as someone who just worked to put food on the table and thereby, in scare quotes, sacrificed himself for his family (which in many ways sacrificed itself far more for him, making any argument for some kind of nobility to his working life basically null, no matter how you measure it), it would also be wrong to say he ended up running that company because he wasn't good at anything else, or was lazy. There was nothing any less honorable in his job than that of anyone else, because the fact of the matter is that almost everyone has a really, really boring job, which is enough to make people

fear Mondays in many parts of the world. Another fact is that most of us are able to find something valuable in these jobs that makes it possible to get up the next day and do the same things over and over again, a mechanism that has no deeper psychological basis beyond telling yourself the job is important and just challenging enough and clearly defined, and how that becomes a good buffer against the realization of how boring it is and how meaningless it is and how little money you have when all is said and done, and how much you'd rather be somewhere else, doing something else with what little time you have left in life (which, as a rule, is something you never have time to think about before it's too late), and that without that buffer you'd unleash a crisis that is much, much greater and more potentially devastating than that which arises in a meeting with an obstinate customer, a late report, the sudden experience of not knowing what day it is or whether you've had lunch and the prospects of yet another morning and yet another afternoon stuck in traffic, while the radio plays a song that makes you cry even if you'd rather not think about why, followed by a few minutes of repetitive traffic info about delays on the parkways and highways due to a cleanup or traffic accident in some distant part of the country that you have nothing to do with, and you wonder why all the stations call it a "traffic accident" when it's clearly a "car accident" and if you'd been a fireman instead, you could be standing there with the huge hydraulic jaws of life in your hand, cutting someone out of the wreck, and maybe then, you think, things would have been different.

Most people also just want to belong somewhere. That shouldn't be forgotten. I think that is where the nobility lies, in the will to do these things you don't want to do, again and again, in order not to be alone. But for reasons I don't understand, my father couldn't do this, even though he wanted it more than most and despite the fact that I convince myself he did a lot of things he didn't want to do for several decades. These are all things I could have asked him about as an adult, had our relationship developed in such a way that that degree of natural trust had developed between us, and had it not been for the fact that he moved or, as is probably more accurate, disappeared out of my life when I was 19. It's complicated, as they say, what I feel about it.

My mother took care of his suit for several years before finally donating it to the Salvation Army.

For many years my mother also felt such terrible shame over the fact that it wasn't she who'd left, that it was technically he who left her, even though it was she who'd had to endure life with him rather than the other way around; she believed it put her in a bad light, made her

seem like a woman with no feelings, and that most people would be inclined to give the benefit of the doubt to my father. For my part I tell myself that my father and I—had he not chosen differently—would have come to a point where we could sit together in the garden, while the sun was still out and the grill still warm, while my mother took things inside after the dinner I'd been invited to, whistling a melody she obviously didn't know that well, and my father and I would have been able to start talking as two adults now, about who we'd become and how, and I could have asked him about Imperial Import and why he worked there.

He had to have dreamed of something totally different from what he ended up with.

My clearest memory about that Saturday is that I'm sitting in his old black office chair, watching my watch as it tells of the day that is slipping away from us, using my legs to spin slowly around and around in the chair to my father's growing irritation as he pores through binders and piles of loose sheets for the documents he needs, becoming more and more frantic.

"The whole day wasted on this," he says, exasperated.

I'm just sitting there, bored. My fingertips are grey from the dust on the underside of the chair.

"Can't you just find them on Monday?" I ask, and regret it immediately, as I can see the despair in his eyes.

"Shit," he mutters and keeps looking. "The whole day. The whole damn day." He turns to me. "Can you try and think whether you've seen a blue binder, at home or in here? Does it ring a bell at all?"

"I don't know."

"Dammit."

I turn around a few times.

"It's just not here!" he yells. "But it has to be here, dammit!"

I stop turning and get up to go out to the storage room again, thinking it'll be easier for him to concentrate when I'm not there.

"Sit back down!"

"I was just…"

"Sit! And try and think hard whether you saw a blue binder, see here, like this one, only blue, not green. Do you remember seeing something like this?"

"I haven't seen it," I say.

"My God, it has got to be somewhere around here. But okay, fine. We're not going anywhere before I've found it, just so you know, got it?"

"Yes."

"I mean it, I don't care if we miss dinner or your cartoons or whatever, I don't care, is that clear? Just so you can be prepared. We're staying until I've found that binder."

I can see the distress he's in. He's biting his fingernails and rubbing his face, before putting a hand over his mouth and looking unhappily out the window.

"But it's not my fa…" I venture.

"It doesn't matter whose fault it is!" he yells. "I've got to have those papers, don't you get that? Is that so hard to understand? This is my job, I have a responsibility. Do you even know what *responsibility* means?"

"Yes."

"You know, I really don't think you do."

"I do, though."

"Great, then you can start taking some responsibility, I think, and not throw things around the house and leave a mess everywhere you go, there's no finding anything in all the mess you and your brother make. Do you really not understand how important this is for me, for my job? For us?"

"I can help you look through the papers in the boxes back there," I say, nodding toward four overstuffed cardboard boxes on the floor in front of the file cabinet.

"No, it'll just end up making a bigger mess. You don't even know what I'm looking for. Just sit where you are and don't bother me, okay?"

"Yes."

I'm not spinning around anymore. But he is.

The next few minutes he spends walking aimlessly around the room, with precise, tormented steps, resembling a cross between a comic strip character and a big brown bear, heedless of all consequences and what will almost certainly lead to several days of picking up and reorganizing documents, grabbing wildly at every stack of paper or binder close enough for him to throw on the floor with all his strength or hurl at the wall after a quick glance at the contents. He does all this without uttering a word, which almost makes it seem less a fit of rage than an act of intense concentration. Sometimes he moves to the side of the office behind the

office chair I'm sitting in, and I don't turn around. I can hear paper being torn to pieces behind me and binders being rent asunder, demolished, a telephone crashing onto the floor, cups full of ink pens tumbling off the desk (these pens were gray with a slight heft and black ink, with *Imperial Import* printed on them in gold letters, and they produced a fine, mellow sound when my father would absentmindedly click the retractable ballpoint in and out over and over again as he sat in his chair doing the crossword in the afternoon, and I remember how I really wanted one, because the few pens I had had blue or red ink and black seemed somehow more adult) and two framed pictures falling down and shattering on the floor and the sound of what I assume is cold, stale coffee from another cup flowing out onto the table and dripping onto the floor.

"Goddammit," he mutters behind me, now even sadder. I think I can hear him crying. "Just so damn typical. I am such a screw-up."

I pretend like I don't hear it. Then it's totally quiet and he's beyond my field of vision. I don't know what he's doing, but I can hear him breathing heavily. Then he comes over to me and puts a random pile of papers back on the now-decimated desktop.

"I'm sorry," he says. "Don't worry about it. I'll try to find the papers later."

"I don't mind helping you," I say. "I can also wait a little while."

"No, let's go home. Come on."

"Can I ask one thing?" I say.

"Yes, what?"

"Do you think I can have one of the pens you have so many of with the logo on it, if they're black?"

"Let's talk about it next time, okay? Is that alright?"

"Okay."

"Let's go home now, kid."

Right after my father moved out, and this was many years later, of course, it became a kind of inside joke between me and Odd about how he'd run off in order to cross the entire globe in search of the promised blue binder, and we joked about how well he'd be understood and received in different parts of the world, the guy who'd never gone anywhere in his life. We conjured up images of him haggling with Egyptians for permission to take a peek inside the Giza pyramids; we laughed at the thought of him on a barge going down the Congo River, surrounded by natives who wanted to hear more about quick connectors and pneumatics; we painted pictures

of him on horseback over steppes and in taxis throughout the world's major cities. It was a way of keeping him in our lives, I think, without letting any feelings get in the way. That's why I never told Odd that I'd found the binder four days after that Saturday at the office, between two magazines in the newspaper rack in the living room, and that I never knew why I just put it in a shopping bag and taped it shut before throwing it in the trash without telling anyone.

But of all the things whose duration I measured in those days, there was one in particular that made such an impression that it more or less became part of me, and somehow also, I see now, after the fact, became a contributing cause, if not The Cause of a lot of things that came after, including my and Peter's interest in the Kubikel building at Forus and of course our interest in Ebba, whom Peter, Jonatan and I would likely have been interested in anyway, but may never have met if it hadn't been for a TV show about atomic bombs I veritably stumbled across one afternoon in the fall of 1989, when I was ten and, unlike during my visit to the offices of Imperial Import, was considered old enough to be home alone a couple hours while my father was God knows where and my mother, if I remember right, had gone with Odd to gymnastics practice, which was a kind of win-win situation for the both of them, since it gave my brother the opportunity to run around in gym socks and throw beanbags up in the air for 90 minutes without a care in the world while my mother got to guzzle coffee while conversing with the other moms at the sideline who were all pleased that children's activities were taken care of by the municipality and didn't cost anything, especially since it was impossible to tell how all these activities were actually doing their kids any good.

If I've managed to piece together my memories correctly, it must have been just after the fall of the Berlin Wall, since a lot of similar shows aired in the months that followed, as if the TV networks weren't content to tell us about the ripple effects the end of the East German regime would entail and the endless possibilities we had in store now that the cracks were showing in Europe's last bastions of communism before they crumbled entirely, but also had to tell us everything they'd kept under wraps for the entire duration of the Cold War. These shows seemed determined to impress upon us just how close we'd been to total annihilation, so they could then entertain us by showing how grim things could have gotten, now that we could all sit back on our couches and breathe a big sigh of relief. Quite a few of these shows used the rather stressful sound of a ticking clock as an auditory cue, as if to underline that for many decades we had been

minutes away from the precipice, ever since the starting gun went off on Friedrichstraße in ‘61, when American and Russian tanks had stood barrel to barrel.

I still remember the title of the show I watched that day, “From Bikini with Hate,” another example of how NRK in those days gave their educational programming titles that were both indisputably concise and designed to draw as large an audience as possible. Ordinarily there was nothing worth watching at this hour, so it must have been the freedom of being home alone that led me to flip through the newspaper and look at the TV listings, where “From Bikini with Hate” quickly stood out. To be honest, the only reason I sat down to wait for it to start was that I might get to see some scantily-clad women. Let me be clear that I can also remember not being especially interested in seeing scantily-clad women at that age; I was more interested, rather, in being interested in what was supposed to be important, and natural, or normal, and this led me to think a lot about whether there weren’t something wrong with me because I wasn’t especially interested in whether women went around scantily clad or not, and a part of me also thought seeing a show about it might eventually spark something in me and make me feel like this was important, so that when I talked to other boys my age who clearly had a lot more than a passing interest in the subject (the fact that at least a handful of them may also have been exaggerating their own degree of interest never occurred to me as a possibility), I could also join in the conversation in a whole different way, such that I actually understood what they were talking about, instead of just pretending, which was what I did and more or less continued to do anyway for the next two years, up until the new girl came to class that last year (I don’t remember her name, to my now surprise and disappointment) and it seemed like almost everyone fell in love with her, and I know for a fact that I was the one pretending the least, and that it was a genuine eureka moment for me as I was biking home one day and realized that if she and I were together (which never happened, not for my lack of wanting it bad enough), I’d be allowed to kiss her, as in really kiss her, as in more than just one little peck, and that it would be quite natural, even expected, and I was obliged to stop biking and take a minute to catch my breath.

What the show lacked in terms of shocking half-nakedness that might have helped me understand what all the fuss was about, was made up for by serving up one atomic explosion after the other, together with all the hair-raising details. Most of what in essence was an American documentary with Norwegian voiceover, modified by a short segment at the beginning and another toward the end where a panel that seemed to have been hastily convened on short notice

(I remember most of them still had on their outerwear, as if their presence was so urgent that they didn't even have time to take it off before the cameras started rolling), consisting of two Norwegian atomic physicists, a sweaty politician, and a science fiction author who was constantly apologizing for perhaps adding nothing of relevance, and who ended up relating a few fragments from H.G. Wells intended both to terrify and send a warning, had mostly to do with the Operation Crossroads and Operation Castle phase of the twelve years the United States tested nuclear bombs of varying strengths on, above, below, and next to the Bikini Atoll in the Marshall Islands in the middle of the Pacific.

This would soon prove to be a bad idea. The test explosions, that is. The residents of the atoll had been told in advance that their goodwill with respect to the imminent and highly necessary experiments was for the benefit of humanity, and had therefore agreed to move a couple hundred kilometers east to the Rongerik Atoll, which in addition to being even smaller, uninhabited, and having neither arable land nor sufficient fresh water supplies, was also seen by the Marshallese as a place cursed by the demon girls from Ujae, which involved a rather complex narrative about a special tree in bloom and a lot of logistics between the atolls. It goes without saying perhaps, but I don't remember all these details from the show I watched as a ten-year-old, which would have made me a kind of wunderkind I was never anywhere close to being perceived as. By anyone. In all honesty, during the first 15 minutes I still held to a secret hope that the other meaning of the word *bikini* would materialize on the screen, and that was the only thing I was able to think about. But since then, I've seen enough documentaries on these nuclear tests that I, to some extent at least, have been able to assemble and make some meaning out of the scattered memories I have of that first show about the atomic bomb, as well as to understand how tragic the fate of the Bikini Atoll is, though unfortunately not unique. The place is basically a sort of tropical paradise variant of Chernobyl nowadays. It's uninhabitable, everything is contaminated. Anything that grows there is inedible. The surrounding ocean, littered with sunken aircraft carriers, battleships and other abandoned warships the US Navy sacrificed to the alter of the arms race and which now, in the eyes of the law and as an example of an egregious, liability-disclaiming gift, is regarded as the property of the Bikini natives, and of course property is inevitably bound up with the word responsibility, and most of the ships were, at the point when an attempt was made to literally blow them off the face of the earth, loaded realistically with

everything from fuel to explosives, so the overwhelming consensus is that it's in everyone's best interest to just let all the shit lie there.

I was not interested in any of this when I was ten, most of it consisting of third-remove consequences that are hard to fully grasp or care about even for adults. What was most riveting, as soon as it had become clear beyond doubt the show would not contain even the most vaguely erotic hint of exposed skin, was the explosions, their almost inconceivable power. Note that my basis for comparison was the odd memory of firecrackers my father set off every New Year's Eve, which took hours because he had always gone and bought what was, in the grand scheme of things, the much more reasonably priced "Family Pack" which, once evening had fallen, never seemed to run out before we were permeated with frost and eight of my father's fingers were blackened by soot, while the last two, the right thumb and index finger, were bright red from sheer abrasion after turning the rough wheel on the lighter against the flint and the flame that burned him as he struggled repeatedly to light the fuses in the strong wind. It's also essential to understand that watching these nuclear tests on TV was quite different in 1989 than it would be today, that is, the fact that I was only ten is only one half of the story. The fact that numerous websites are now devoted to this topic where you can literally scroll through lists of detonations sorted alphabetically, chronologically and according to explosive force—that is something else entirely. Nowadays you can sit and stare at atomic blasts all day long. There's no comparison. This isn't one of those in-my-day-things-were-worse-and-we-had-to-find-our-own-entertainment-plus-stay-outside-all-afternoon argument, I am simply trying to explain one reason why the atomic blasts I saw that afternoon made such a huge impression, namely, that it felt like gaining access to some secret, which it certainly had been for many years, but I mean a secret in the sense that none of us then could ever have expected to see anything like a mushroom cloud of almost apocalyptic proportions in the sky, unless we were unfortunate enough to find ourselves in the approximate geographic vicinity—which seemed a real possibility at that time, and I was certain, absolutely certain, convinced that if I ever got to see the same thing again, it would be when it really was happening and everything was coming to an end. I wasn't afraid, however. Nothing about it scared me, not that I recall at least, and if it did, then the horror was buried under the ecstasy of seeing such a relentless expansion of energy. I don't think there's a person alive who's never wanted to tear everything down. Demolish it all entirely. Leave not even a trace behind. I know I did, with all the rage I carried around as a child, only I didn't know it was rage because I

considered rage to be connected with something that was said or done and not for instance with wetting the bed several times a week until I was probably thirteen and being really sad most of the time and even sad about the fact that I was sad and not knowing that I was sad because I was actually angry, and that it was my father—whom I also loved—whom I was angry at, in a very unhealthy way, and it made me very confused and deeply upset when he didn't seem to understand this or when he made it clear to me that none of it would never be enough, what we had to offer him as a family. From a therapeutic standpoint, I am no stranger to the thought that sitting there watching these atomic blasts, combined with having the house all to myself (for this also had a certain symbolic value, I'm convinced) and therefore being able to take in what I saw on my own, had a positive side to it. A place to channel the rage I'd never suspected was in me prior to that moment. Perhaps. One of the reasons I never went to therapy was my shame due to the fact that so much of the "mental baggage" I carried around had to do with my father, that it really was nothing more exciting than that, and that I would bore the psychologist. Some part of me was probably also scared that the simple fact that my father sometimes hit me would take up all the space in the conversations and define me and shape me over the course of therapy, becoming something we constantly returned to, always in order to dig in and drill deeper, as if it were due to my seeming refusal to acknowledge that being hit by him had been deeply traumatic (in contrast to, say, above all just very painful, or demeaning), and that my very insistence that it hadn't been, traumatic that is, would be regarded by the therapist as the very reason I needed therapy to begin with—plus the underlying reason for my having gone to see a therapist in the first place, under the illusion that it was some other thing, some unrelated thing that I was "struggling with"—and would therefore deem it necessary to use the alleged "fact" that I didn't see myself as "traumatized" so much as just "very disappointed" as a clear indication I was in denial and carrying pent-up, deeply repressed traumas, and the whole point of being told you are in denial is that the argument that the denial is the problem itself only gains in strength the more you oppose it. Plus, I was afraid the psychologist would eventually ask about my own attitudes and boundaries as a parent and start to suspect that because I had it in me, I might end up doing something similar to my own children, given that I "apparently" thought so little of it (which the therapist would use as a pressure point/"tool" to get me to realize that the denial was the real problem, all that time it was of course better to be a victim than abuser in the eyes of the person concerned), and that when I proceeded to protest vehemently against the insinuation that I myself

might become an abusive father, that too would become a form of denial, given that I already denied the original trauma and was now also denying the upshot of the original trauma, which, according to a wide range of theories on the concept of original sin in psychological terms, made it possible that I "had it in me," which would bring us into an endless spiral around all my denials and attempts to get the therapist either to see that I wasn't in denial or that it was the therapist himself who was in denial about the fact that the wish to as it were diagnose me with denial was at bottom an expression of the fact that the therapist had a quietly roaring need to see to it that these assumptions and his psychological theories were in agreement on the map/terrain front, and that it was quite right of the therapist to get paid for these sessions because the therapist offered curative mental help and "life tools," and that the other side of denial consisted in the fact that it was more important for the therapist's self-esteem and general *joie de vivre* (a recurring expression) to know that he wasn't wrong in his observations, than that I was helped in any way by all this and was perhaps even saddled with greater problems trying to cram it all into my "mental baggage" (which the therapist would have had me visualize as two old, beat-up suitcases with handles held on by duct tape) than I'd had before I opened the door and went in to start "the healing process."

One of the former soldiers they interviewed on the show, now a man in his 60s, wept quietly as he talked about how much pain and anxiety it had caused him to be eyewitness to the nuclear tests, not primarily because he'd later lose several of his fellow soldiers and friends to some of the most horrifying cases of cancer, which were all clearly related to where they'd been stationed, but simply because he had been at Bikini Atoll and seen with it his own eyes and heard it himself, this waking nightmare, making him realize how fast the world could come to an end, which sent him into a ditch he'd never quite been able to crawl out of, and he went on to explain how everyone had been ordered up on deck and made to sit down with their backs turned, close their eyes and keep their hands in front of them, an ocean of bowed heads in white sailor's caps amid the smell of oil and ships, and how the rays of light had still been so strong that they all were able to see the blood vessels and the bones of their hands through closed eyes, the subsequent heat so intense that it scarcely seemed real, but like something coming up from far, far below.

In spite of all this, the show didn't scare me. "Scare" isn't the right word, having little to nothing to do with any of the feelings that welled up in me in tandem with the water geysers and

radioactive clouds as they shot up and spread before my eyes, or by watching the compressive waves expanding in all directions, forming foam-white rings in the water, almost poignant in their mathematical perfection, as during the Baker test of 1946 (aesthetically appealing enough that Kubrick included this very footage at the end of *Dr. Strangelove* [which I of course hadn't seen at that time] to the sounds of Vera Lynn's "We'll Meet Again," and when I was old enough to understand that the music here is only partially intended as sarcastic and in fact surprisingly affecting, I was also able to interpret it as truly ominous) and how the palm trees on some of the footage shook violently and bowed toward the ground like obedient servants when they were struck by the utterly destructive blast of wind at several hundred thousands of kilometers per hour. I was not "scared" when they showed the detonation of the hydrogen bomb Castle Bravo either, even though the voiceover narration had built it up for several minutes and even given some warning of what was coming, as if you could go blind or crazy by looking directly at the screen or something. The Bravo was a hydrogen bomb of the Teller-Ulam configuration, and prior to its detonation on the otherwise immaculate crack of dawn on March 1, 1954, the weapon had been calculated at six megatons' explosive power, in itself not an amount to take lightly. Of the more than 1,000 nuclear tests conducted by the United States up until 1992, almost had a capacity between a few tens to hundreds of thousands of kilotons. But at the moment of truth, aided by an unforeseen reaction with a lithium isotope, Castle Bravo proved capable of delivering in the neighborhood of 15 megatons of TNT, thereby blasting its way into the annals of history as the most powerful bomb ever tested by the United States, a thousand Hiroshimas in one blinding flash, which transformed the sky into a spectacular inferno, causing pulverized, radioactive coral reefs and equally near-annihilated sand to snow down all over Bikini Atoll and the ocean, including the Japanese tuna fishing boat Daigo Fukuryū Maru, its crew already putting their gear away for the day, barely a hundred kilometers from Bikini and therefore outside of the restricted area, but just as much *within* it since the zone had only been measured for a magnitude of six megatons, and the fishermen watched as the sun rose in the west like a resplendent sunset in reverse, so the day had already come out completely askew by the time they were inundated by the falling snow from Bikini a few hours later and had their hair, hands, clothes, indeed the entire boat covered in something they had no way of knowing was composed of strontium-90, cesium-137, selenium-141 and uranium-237, which, if you don't know what any of this is, suffice it to say that you don't ever want it to get on you. And as long as we're on the topic of fear: the

Japanese fishermen suffered from acute radiation poisoning for over two weeks before they arrived at port, and I mean really suffered, in the form of explosive diarrhea, intense headaches and nausea, skin that developed oozing boils and faces that took on the color of night and skin that peeled off and night after night in their berths below deck, gathered around the bag with the snow-like ashy substance they'd picked up with their bare hands and preserved so it could be investigated on their return, ignorant of what it was doing to them with every passing second, along with how the crew was met with distrust and shunned by a people who had all the reason in the world to be radiophobic and steer clear of those classified as *hibakusha*—literally, a person affected by the bomb—in the belief that radioactivity was contagious.

At one point I became aware of my wristwatch and began comparing the movement of the ticker to the repeated images of terrible explosions on the screen, thanks to a digression in "From Bikini with Hate" about the first American hydrogen bomb test, called Ivy Mike. The bomb had been detonated on the first day of November, 1952, on the Enewetak Atoll, approximately three hundred kilometers west of Bikini, appearing quite different in the sky than Castle Bravo's herculean fireball that slowly rose up in the atmosphere as it pushed clouds to the side to form its own weather system. The Mike bomb was detonated at ground level and first appeared like something out of a cartoon, like one of the exaggerated consequences of something Donald Duck had done that now took on fateful consequences for him in the last scene, even though subsequent frames, as soon as the dust settled, never showed anything more than a bewildered and rather shamefaced duck with a soot-covered beak or something like that. The version of the Ivy Mike detonation I saw, I realized long after, was a sharply colorized version of the original black-and-white footage, produced for an American TV audience with monumental music and a powerful boom added in post-production that further reinforced the experience of seeing something that was thrilling, but essentially harmless. The voiceover emphasized the fact that the cartoonish sunrise, powerful enough to generate lightning from the clouds above, was filmed with a high-speed rapatronic camera, which in 1952 must have cost half a country's total defense budget and was capable of bringing exposure time down to ten nanoseconds per frame, and that the full eight seconds I watched the thermic fireball rise, tracing otherworldly forms out of plasma and radiation or sheer heat, in glowing yellow and rust-brown tones, was therefore just as unrealistic as the cartoon it resembled. "Against such bombs as these, no warning system is of any use," I remember the narrator saying. "All that a hydrogen bomb is designed to accomplish is over

within a couple hundred milliseconds, before your eyes have even had the chance to register the first flash." I also remember looking down at my watch after hearing this, the longer, thinner of the two hands, and realizing how long a second was.

The show went on to display what best can be described as a bizarre cavalcade of atomic explosions at normal speed and in rapid succession, without commentary, none of whose durations I could possibly time, like an advertisement for a product, or the future; I remember how I couldn't relate to any of it in the way the show's creators must have intended, that is, to be disturbed by all this destruction, so the only thing to do was to give myself over and embrace what I was watching, each detonation more spectacular than the last, all of them unspeakably beautiful against the blue sky above the Pacific and the American desert. The explosions lit up the burlap-texture wallpaper on the walls around me, making them too seem beautiful. Most of all I enjoyed the few seconds after the enormous, glowing fireballs had completely blinded the camera, when the mushroom cloud rose, forming new clouds all around, the seconds before the bang reached the microphone and you could allow yourself to think that the explosion had been so big that it was absolved from having to make a sound of any kind, instead going over into some other sphere, something heavenly. And so then, when the sound came, it was always a letdown, no more than a fairly common, sharp bang, as if someone was shaking a rug against the stairs one Sunday, but in the seconds following, the first audible proof of what had occurred was replaced by a deep, prolonged rumbling, mixed with the sound of thunder, as dust and soil (and, in what was decidedly not a child-friendly moment, a cow) rose up from the trembling earth and swirled upward, as if everything strove to partake in the Ascension, and the mushroom cloud stretched to a height of around 130,000 feet and some miles in diameter. I'd never seen anything more impressive.

The last part of the show was definitely the dullest, of which I remember only bits and pieces, consisting of multiple talking heads talking way over my head, about things far beyond my comprehension. But I know it had something to do with the late aftereffects of the nuclear tests at the Bikini Atoll and its surroundings, the pollution and the disc-shaped concrete dome they built to seal the crater in which they dumped the radioactive earth scraped from the surface of six or seven of the most polluted islands of the Enewetak Atoll. 70,000 cubic meters. 43 test explosions. A vast amount of plutonium 239 that will remain a problem until the year 52238 or thereabouts. Also known as the Cactus Dome. Or simply *the Tomb*. I gave a short sketch of the

dome and the challenges with the concrete structure's durability under subtropical conditions, along with the drawbacks inherent to a visually appealing landmark given people's natural curiosity in my dissertation, "From Ion to Eon: Atomic Decommissioning and Waste Management for the Future" many years ago. I won't say it was the TV show in and of itself, nor especially the last part of it, which laid the groundwork for my choice of career. It's not like a light switched on in my head, that I immediately got interested in it or understood the least part of it, even though much more must have lodged itself in my consciousness than I was aware of at the time. To be honest, I'm reasonably sure I got up during the show's last twenty minutes to go to the bathroom and get a slice of bread with some sort of topping on it from the kitchen.

The reason I remember anything specific at all from the last twenty minutes is probably because it coincided with the very moment my father came home and hurried straight into the living room from the hallway with his shoes still on, as if what he with some justification suspected was happening in there was so serious that it warranted breaking the otherwise absolutely unbreakable rule that all footwear without exception must be left by the front door before one even could think about proceeding further into the house. His eyes flitted between me and the television, I remember, while asking in this weird way he had of emphasizing every word without speaking any more slowly: "What in the name of God are you watching?" He seemed genuinely irritated, both that I was sitting inside watching TV instead of being outside, and that I was watching a show he immediately identified as something I was too young for and that he should have made sure I didn't come into contact with, though he also seemed somehow impressed that I wasn't just lying on the couch watching some "braindead" film, his category for almost all the movies I watched, but had chosen something with "substance," not to mention I'd managed not to destroy anything inside the house in the meantime, for him a constant source of worry, in spite of my repeated attempts to assure him I'd be careful, a worry that came over him every time he left me somewhere without supervision, each time with the same admonition, despite the fact that I never, with the one exception of when I was four and had that terrible accident involving a pedal car where I smashed the glass door of his stereo console, whose dual purpose was to protect the stereo from accumulating dust he feared my mother would come along and wipe up with an inadvertently overdamp cloth, and from the tendency of my and my brother's hands to pull down the small pegs marking the equalizer settings on the amp, thus

completely ruining his experience the next time he sat down to enjoy music by Electric Light Orchestra or some other horrid and musically generic stuff.

After standing stiffly a few moments next to the couch, silent, his arms crossed, waiting for me to inform him what it was I was watching, and even more importantly, *why*, he gave up and sat on the couch next to me, still in his outer clothing and wearing his shoes. The truth is that I didn't know what I should say to the loaded question of *what in the name of God* it was I was watching, having a clear sense that what he wanted was not a pure description of the content of the show, and now it had also gone too long to give some disarming reply about it having to do with the atomic bomb. Nor is it certain that he meant it as a question I was supposed to answer at all.

We simply looked at the screen together in silence for a couple of minutes, both of us uncomfortable, I think I can say, and I noticed how I was watching in a completely different way now, as if I was trying to see it with his eyes, since I assumed an adult would watch it with a sort of frown and a knowing nod at some of the things mentioned in the voiceover. I know my father saw me doing this, and it must have irritated him endlessly.

We watched short interviews with men with a similar frown who spoke solemnly about the consequences of continued testing. One man went into the problems with the doctrine of mutually assured destruction, that systems were out there that did not depend on anyone being left to initiate them and that could not be stopped once they'd been activated.

We watched the short, crackling clip of a broken Oppenheimer in 1965, looking back on the first nuclear test explosion 20 years after the fact and citing the Bhagavad Gita: *Now I am become death, the destroyer of worlds*.

At this point, my father frowned and nodded knowingly. Then he began slipping off his shoes and using his toes as pilots to navigate them side by side and at a right angle against one coffee table leg, as if this careful, neat action was equivalent to having put them down next to the front door, the importance of which he was constantly reminding us, and it was then I recall he asked:

"Have you heard of the word *entropy*?"

I have the distinct memory of frowning here, perhaps also placing a thoughtful finger under my nose or some fingers on my forehead, to indicate I was filing through all the stored

knowledge up there, investigating whether this was something he'd talked about before and I ought therefore to remember.

"Don't think so."

"It describes the degree of disorder in a closed system. And entropy can never diminish, you see?"

"Okay."

"But do you understand it?"

I shook my head.

"It means that everything is slowly falling apart. And there's no way back."

My clear memory is of a cold November or December sun outside, whose rays hit the lower part of one of my father's shoes to reveal how dirty they were, and the sound of my mother who'd also just come home and was speaking quietly to my brother out in the hallway. My father took off his jacket, placing it over the armrest of the couch.

"But you've heard of the city Warsaw?" he asked.

I'd heard of Warsaw. One of the boys in my class was from there, a few weeks back he'd put on a Polish traditional costume and gave a sort of presentation for us on Lech Wałęsa. I don't think the traditional costume had been his idea, but our teacher was beaming, clapping delightedly, when the boy walked into the classroom after putting on the outfit out in the hallway, by the bathrooms. He looked positively dejected, but that could also have been due to the fact that Wałęsa, who it seemed was a friend of his father's, was in trouble. The boy, whose name I no longer remember (he left that summer, it's possible he went back to Poland, he had no friends here regardless), stood and spoke about the word *Solidarity* and what it meant while the teacher stood next to him, unable to contain a smile or stop fiddling with the red tassels hanging from his waist, her mouth moving the whole time, perhaps because it was she who'd written most of what he was saying and wanted to be sure she was ready to give him a prompt if he lost the thread, the whole thing being fairly complex. The rest of the day we made placards, which was the assignment we got every time something happened in the world that was sad or difficult for us to understand, we glued up the flag and colored in a map of the country, pictures of Wałęsa and the Solidarity logo, cut out matchstick men we'd been told to draw as creatively as we could before gluing them on the poster, side by side with one another so they'd look like a chain of children holding hands and allowing hope to flow all through them or something along those lines.

His name might have been Májek. Or Marek. I'm not sure.

"And you know who Hitler was, of course?"

"Yes."

"You sure?"

"Yes."

"In 1944, the Polish Home Army rebelled against the Germans who'd occupied the country, the so-called Warsaw Uprising. They wanted to take their country back, right? Liberate the city. But they didn't succeed, they were defeated. So then, as revenge, the Nazis decided to destroy Warsaw. Completely. I don't know if you've ever heard of a guy named Himmler, but anyway, he gave the following order: 'The city must vanish from the face of the earth. Not a stone can remain. Every building must be razed to the foundations.' For two whole months the city was bombarded, from the ground and from the air, day and night. Around the clock, Ingmar, without stopping. This is how the destruction of Warsaw began. After this, they sent in dedicated units to blow up and burn anything that wasn't already destroyed. Until nothing was left. Twelve thousand buildings, churches, schools, universities and hospitals, libraries and museums with hundreds of thousands of irreplaceable books and artifacts, all the roads and streets and bridges, everything levelled into unrecognizable ruins. All the people deported. Almost a million people lost everything they owned. And I do mean everything, almost a hundred percent of the infrastructure. An ocean of ruins. The city ceased to exist, can you imagine? But that's not even the worst part of it."

I tried without success to imagine what could possibly be worse than that.

"The worst thing was that they tried to build the city back up again. Do you understand? They should have kept to the original plan, to just leave everything alone, leave it as a monument of everything that is gone for good—for future generations. So that, you know, so that in a few years you or all of humanity for that matter could have gone there and seen for yourselves what might happen. But no. The inhabitants of Warsaw began returning, uninvited. Even before the war was over. They came out from their hiding places, from the concentration camps, from the neighboring countries and the forests and I don't know where. They showed up among the ruins, picked up bricks from the ground, and set to work rebuilding the city the way they remembered it. Why did they do so, do you think?"

"Because they had no place to go, maybe? I would have also gone back, I think."

"I'll tell you why: they came back because they thought life could be like it was before, Ingmar. But there's no way to pick things up where they left off. And then, because of a leader named Stalin—you've probably heard of him too, but that doesn't matter as much—something called the Office for the Rebuilding of the Capital was established. Now then. This office ordered not only the reconstruction of certain historical buildings, but more or less everything, all the monuments, every last centimeter that could be recreated. What they did was not just reconstruction, it was making a copy. Naturally—I was about to say fortunately—this proved to be an impossible project, and parts of Warsaw were instead built up in a more modern style, as a beacon for socialism, but that's another story. Do you follow? This is important. The fact of the matter is that as good as the entire Old Town was recreated just as it had been, down to the smallest detail, according to their store of memories and photos and drawings. But it's not quite the same, is it? Exactly. The city called Warsaw isn't Warsaw, only a city with the same name built on top, a city that looks like a city that once existed, a city called Warsaw. All cities change, that's not what I'm talking about, Stavanger a hundred years ago looks nothing like Stavanger today. But what they did in Poland was to try and get the toothpaste back in the tube again. It's impossible. You can't go back again the next day. This is entropy."

I couldn't understand how what he was talking about had anything to do with the show whose end credits were rolling just then.

"If you don't understand what any of this has to do with the show, it's because you don't see how it also has to do with this word *entropy*. As soon as the atom bomb was invented, it was impossible to…uninvent it. To pretend like it never existed. This is why you get things like Hiroshima. You've heard of Hiroshima?"

"Yes."

"Good. And now you know what an atom bomb is. And all that it can do?"

"Yes."

"Good. Because that's the reason—let's hope—no one will ever drop another atomic bomb. Now we all know what it's capable of. And what will happen if someone sends an atomic bomb at someone who also has atomic bombs. Like the US and the Soviet Union, right?"

"Yes."

"Once the Americans find out, and are fully certain, beyond a shred of doubt, that a Soviet atom bomb is headed toward them, an atom bomb will be sent in the opposite direction, toward, I

don't know, Moscow…probably. And as soon as Moscow realizes an atom bomb is headed straight for Gorbachev's office, the Soviets will respond by sending two more atom bombs toward Washington and Ronald Reagan, who from their side will—well, you get the picture. After a few minutes the automatic systems kick in and neither the Soviets nor the Americans need to give any orders to launch their rockets anymore, from then on it's all automatic, until all the bombs have detonated over their targets. Thousands of them. I'm not saying all this to scare you."

"Okay."

"This is just to explain what it is I'm talking about. Explosive entropy. And to tell you why there's nothing to worry about. Do you understand?"

"Yes."

My father ran a hand through his hair and smoothed it out. His hair had just started getting streaks of grey, I remember him being embarrassed about his combover and brusquely batting my mother's hand away whenever she tried to tousle the little hair that was left up there, as if it could lead to permanent damage.

"A nuclear explosion is entropy in a double sense," he went on. "You can't bring the atoms and energy back together, so the radioactivity becomes scattered to the winds. The politicians in charge can't take it back either. What's happened has happened."

"Yes."

He picked at his jacket which was draped over the armrest before putting the palms of his hands on his knees and standing up.

"Everything falls apart sooner or later," he sighed.

"Is it okay if I go over to Jonatan's for a little while?"

"Did you eat?"

"I'm not hungry."

My father bent down to pick up his jacket and shoes.

"Have something on bread before you go anyway."

I don't know how to describe it, the time it took to walk over to Jonatan's place, the ten or twelve minutes it took to get there in the afternoon sun, down the road and across the intersection, up the hills to the house that was half-hidden by the trees on Nådlandsberget Street. It wasn't fear, exactly. But I went there with visions of monstrous flashes of light and bombs going off all around me, behind the houses and in the forest, crushing shockwaves and a heat more intense

than the sun, pulverizing office buildings and the industrial areas to the right and the left of me, cars having their paint singed off in the fraction of a second before they were lifted by invisible hands and hurled in the same direction the trees were bending before they snapped. Soot everywhere. And screams. Heart-rending death rattles. People burning, tricycles abandoned in the street, the wheels burned until the spokes stuck out every which way like dead flowers. Dark outlines of children's shadows permanently etched onto the bleached pavement. And all my clothes and skin vaporized in the blink of an eye, though still I was able to walk on effortlessly, a walking skeleton, more than radioactive enough to put a quick end to anyone still living who, with horror and madness in their eyes, came crawling at me, among them my father, dressed in the tatters that had once been his light suit he forced himself to wear every Sunday, even though we never went anywhere nor did we ever expect guests, and he screamed too, but it sounded no louder than a whisper when he asked what in the name of God had just happened here.

Jonatan's dad's name was Rolf and he ran *Salon Rolf* out of the basement of their house. I think this was more common back then, before all the chains came along and took over. As I recall, anyway, it seemed like almost all the mothers in the neighborhood would go down basement steps and through veranda doors to the home hair studios they gave their business thanks to various friendships and mutual contacts, because only the most well-off wives of oil industry folks indulged themselves at the more renowned hairdressers in town. Almost all the men and their sons, for their part, went to one and the same guy, a friendly, chatty type with a handlebar moustache and the exotic name of Leon. He was a fairly reasonably priced men's barber with a repertoire of about two hairstyles and one bottomless bottle of perfumed hair tonic he always pulled out as a concluding *pièce de resistance* at the end and offered to us, which made everyone look and smell more or less identical when they came out, and because his salon was also right next to a fuel station, it was considerably easier for the wives to get their husbands to pay him a visit if they were going there to fill up anyway. At least, this is how my mother reluctantly made me and my father visit him, which we otherwise wouldn't have done voluntarily. She never gave any warning and always waited until we were on our way out the door to run some errand or other before adding, as if it was something that had occurred to her right there and then, which it certainly was not: "Oh yeah, and make sure to stop by Leon's to get a haircut." Before we could raise any objection, she'd shut the door behind us.

Normally my father got his haircut first, while I sat and waited in one of the worn leather chairs by the window, flipping through the magazines while pretending not to be listening in and especially not to notice the way he was at pains to throw around amusing anecdotes from work and incidents at the office that I knew were likely, presumably, almost certainly untrue, or at least contained major exaggerations and amounted to little else than tales of how he wished his days could be. I think that this was why he also directed most of the conversation that passed between me and Leon afterward; it was always my father who let him know how to cut my hair (not that that mattered, the result would have been same if he'd been speaking Spanish backwards), it was he who spoke up before I had a chance to open my mouth, he who filled Leon in when I was asked how things were going at school and what I did for fun, so that my involvement in the conversation was largely limited to *yes* and *no* and a nod in confirmation to the last question he asked toward the end, one that was meant rhetorically at that: "Want something to make your hair smell good?" My father ignored my nodding and continued to answer for me, "Yes, of course he would, wouldn't he?" so that I felt obliged to nod once again, to both of them, before the blue bottle was fetched off the shelf and Leon poured a few generous drops on one palm, rubbed his hands together in a way that reminded me of a magician preparing for a trick, and after, when I hopped down from the chair and put my jacket back on, I smelled like a real, grown man, going around the rest of the day feeling like a future version of myself, all the way until the next morning, when I woke up and the smell of the person I would be someday had seeped into my pillow, while I myself had returned back to my own age.

My brother Odd had his hair cut at home by Mom for about as long as I can remember. This was the price he paid for not letting himself get dragged over to Leon's, and it gave him what I can only describe as a highly characteristic hairdo. But he bore it with pride.

Regardless, since just about every basement salon was run by women, Jonatan's father was held in especially high regard in the business simply by virtue of being a man, and a figurehead because he was a ladies' hairdresser who only under extraordinary circumstances would ever tie his cape around a male neck. Rolf Madland was one to whom other home hairdressers would send referrals and assist in setting up appointments when their customers wanted more than they thought they could reasonably provide or it was for one of life's biggest moments. Very few people got married in Forus between 1982 and 2000 without first paying a visit to Rolf. He always had long waitlists and kept the same clientele for decades. He had two

phone numbers, one his clients could pass on to their friends and another he dutifully answered when it rang, which was also why none of his clients got annoyed at these unpredictable interruptions to their hair dye treatment or highlighting, when they had to flip through one of his motorcycle magazines as he answered the phone, usually engaging in small talk for several long minutes with the client on the other end. They accepted this because they appreciated the time he took for them, and the fact that he really *saw* them and their hair needs when they called to set up an appointment, and the way he made them feel like he wasn't the least bit busy, really just glad to hear from them. His pricing wasn't what you'd call competitive one way or the other, but fluctuated widely, seemingly taken out of the air and "individually adjusted" when he stepped behind the register and summed up whatever treatment had just been done. None of this mattered. No one went to Salon Rolf for the hair treatment alone. You went there just as much for the company, and to be handled by someone who understood you and cared about you, in essence a place you could go to talk about everything your husband didn't want to hear about. What Rolf offered was a place where you were discharged from your role as a spouse and mother for a few hours and treated as a person, which many found freeing in a way that was almost addictive. He had no trouble shifting back and forth between topics like Pirsig's Metaphysics of Quality in *Zen and the Art of Motorcycle Maintenance* and menstrual cramps, for which he managed to show genuine empathy and could suggest a number of remedies and exercises that had helped other clients. Most of the advice he dispensed was preceded by, "I had a client in here last week…" Nor did he have any trouble understanding what it was like to be in the first generation of Norwegian women who worked full time while also being expected to be grateful to men in general for it every single day, and who were therefore in no position whatsoever to complain about it, when additionally they were almost always responsible for 90% of the running of the household, *sans* cutting the grass and washing the car. He would say things like, "I know full well that I'm a ladies' hairdresser and motorcycle enthusiast and have never had any trouble being accepted in either of those roles, and it's because of a freedom very few women get to enjoy in this day and age." Always adding: "I hope things will change in the new millennium." Or: "I read both men's and women's magazines, and I can tell you that both of them are good at making you feel inadequate." He managed to be an ambassador for certain aspects of tantric sex while being neither intrusive nor overly familiar in the way he spoke of it. Nor in any way proselytizing. People had to do what was best for them, was his conclusion in just about everything. He was a

source of knowledge about infidelity and erectile disfunction as well, and he read his wife's Danielle Steel novels with genuine curiosity, because he was of the view that if he believed it to be no more than a braindead form of entertainment, he would mean he'd married a braindead person and that the majority of his clientele would also by extension be wholly lacking in measurable brain activity, which would in turn imply a corresponding lack of brain activity in himself, given that these were the people in whose company he'd chosen to spend his days and nights, and this was a far scarier scenario than almost anything else he could think of. "What people don't understand," he would often say, "and by 'people' I mean almost exclusively men, even though there are of course many women who believe themselves too good to read genre literature of the kind Danielle writes, is that these books function as spiritual enlightenment as good as any other. To read her is like sitting in a quiet room and focusing on the sound of the ceiling fan and the resonance from the walls. What happens in these novels isn't that important, who's in love with whom and who dies and inherits the estate or succumbs to the temptation to cheat on page 237; it doesn't matter to me, in other words, which pair of pants belongs to which man, I'm always confusing the characters' names anyway and my wife's always having to explain the backstories to me. When I read those books, I read them to be moved by the monotonous drone of the words, the assembly-line language. I mean this in the absolute best sense. I read and I turn the page and I read and I turn the page and I read and I turn the page and none of what happens is all that exciting to me, men and women come and go, they get dressed and undressed and cry and laugh and their fortunes rise and fall, but it's as if the eternal stream of events she describes, combined with the physical action of turning the pages, as well as the awareness itself that I'm reading words and that all of these people are coming and going, all of it adds up to the feeling I get from sitting here in the salon, listening to the sound of the ceiling fan. At first it's irritating, it gets on your nerves, no doubt about that. But if you keep listening, without getting hung up on *why* the fan is making the sound that it's making, or *what* kind of sound it's making, but manage to focus on the fact *that* it's making a sound, letting only the small variations in tone occur without looking for a pattern or a rhythm or a meaning, just let the monotonous sound *arise*, let it work within you and through you, then at times it can seem as if hypnotic doors are opening to the most extraordinary places, rooms where not even a Shakespeare or Ibsen or whatever any of their names are could have taken you, because with them you're never not aware that it's Shakespeare or Ibsen you're reading and that that's what's

important, so that with each turn the page only you become all the more aware of being a smart person. What I'm talking about is real, spiritual awareness. Very zen. This isn't the same thing as saying that I don't sometimes burn inside with certain questions; it's not always I manage to read her books in this way."

It was the hairdresser himself who met me when I rang the doorbell that afternoon in the autumn of 1989. I always wanted it to be him, because he let me in as if I was one of his clients, as if he'd been waiting all day for me to come.

"My goodness, there he is. Been a while. Come in, come in. Jonatan's just back from soccer practice and jumped in the shower. You know how people smell after they come home from soccer practice?"

"No," I said.

"Like old socks, Ingmar. Terrible sport, if you ask me. But you can hang out with me for a bit, yeah? I was just cleaning up after a client, want to come down to the salon and help?"

"Sure. Did you have a lot of clients today?" I asked, feeling obligated to ask something like this.

"Ah, no, not too many today. Three or four, was all. But I'll tell you what, it got pretty hairy! Women, you know, they sure do have a lot of hair, am I right?"

"Sure."

"And what about you, then?" he asked, walking in front of me through the house and down the basement steps with his shoes on, at Jonatan's we were always allowed to wear our shoes if we wanted, I think because of all the American TV shows he watched on cable. "You and your dad still going to Leon, I guess?"

"Yep."

"Well, well, gotta get that hair cut before it gets out of hand, isn't that what they say?"

"I guess so."

I remember wondering which hairdresser Rolf went to, which felt like a very smart thought along the lines that there was always another layer to the onion, and that it wasn't a given that the hairdresser he went to returned the favor by going to Rolf, but there would always be somebody who was a little better at what they did and that at the end of the line there'd be a completely bald man who could just pull people's hair out with his bare hands and still manage to create the most incredible hair styles you'd ever seen.

The salon, which I'd been inside before, and was really just an oblong basement room of about 15 square meters, had much more light than Leon's, even though the daylight had only two narrow windows to squeeze through. The walls here weren't a rusty brown or covered with fading pictures of hairstyles (all of them far beyond Leon's expertise), but clean and off-white, the same color as the styling chair, which was free of all old man smell. The whole room smelled, if I had to try and find the right word for it, friendly. I could imagine the different perfumes the women who walked in here had on and how they kind of blended together and the row of hair products that stood elegantly side by side on the shelves, with their labels facing outward and no visible signs of age or unintentional spillage. The floor was the only thing that didn't look nice, a white linoleum with a parquet structure that was covered by big tufts of hair in different hues. Rolf normally waited to sweep until the last client of the day had left the salon, which meant that the later your appointment was that day, the more signs there were of the serious work being done in here, which left no time to worry about such trifles as an untidy floor. And, it was implied, because otherwise there would be little if any proof that anyone else had ever been at this salon; this resulted in a certain hierarchy and a battle for the earlier appointments, which at other places are the ones to go last since not many people would or could get their hair done at eight in the morning unless absolutely necessary.

"Gosh, what do we have here, Ingmar, huh?" said Rolf with a glance at the floor, which almost looked like it was covered wall-to-wall and likely to trigger a formal complaint. "I just lose track when I'm working, you know. My goodness. All right. Here, Ingmar, you can just take this broom." He turned and handed me a large, black broom with a very soft touch, it was almost as if the broom levitated more than being held up by him, and once I'd taken it, the hand drew back with the same wave-like motion, landing on the back of the styling chair. Considering it now, it seems to me all his movements flowed with that elegant softness, regardless of what he was doing, not with an exaggerated or affected femininity from the familiar parody of the male hairdresser, based in part on the rather odd notion that the assumed homosexuality of the hairdresser might garner a few laughs in and of itself; with Rolf, rather, this was the natural result of many years working in tandem with delicate heads and sharp scissors, which gave him his own special *Fingerspitzengefühl* that couldn't just be switched on and off. I know my father was convinced that deep down, Jonatan's father was a *butt bandit*, a word he often used back then, based only on the three parameters that Rolf was a hairdresser, wore a ponytail, and had *elegant*

hands (my father's words again, pronounced with a certain inherent disdain), which for him was of a piece with all those little movements he viewed as unmanly, soft. Rolf the hairdresser stood almost a head taller than him and spoke up at PTA meetings far more often than my father, who mostly sat and stared with his hands crossed in the back row and wondered why no one proposed him for any committees. Rolf usually volunteered to give short concluding speeches at the end-of-semester ceremonies in which we performed what had to have been quite inconsequential sketches which, still, we'd composed ourselves, along with singing in canon and reading jokes none of us understood but which gave our parents a good laugh, until his speeches had become a kind of tradition, connecting back with the previous semester's speech, so that after graduation we could get booklets containing all the previous years' speeches as a kind of chronicle about us and the six years we'd gone through elementary school. These were by and large the arenas in which they met, my father and Rolf, not enough to really get to know each other, but more than enough for my father to decide that Rolf "wasn't quite to his liking," which was my father's way of saying he basically couldn't stand the company of others. I can't rule out the possibility that my father also saw Rolf's hair as, I don't know, threatening, perhaps only half-consciously, along with the fact that he had to sit there with his dismal combover and never took the floor from a man who was both five years his junior and had full, dark-blonde hair that reminded you of Don Johnson toward the last season of *Miami Vice*, a show my father held in fawning adoration.

"Just sweep it all in the corner under the sink there," said Rolf, "I'll get the rest with the dustpan letter, don't worry about it."

"Okay."

"So, what are you and Jonatan getting up to?" asked Rolf as he used a spray bottle in the sink to clean the streaks of shampoo from today's clients. "Going outside or staying inside?"

"Don't know."

"Do you prefer that?"

"What do you mean?"

"Not knowing what you're getting up to. I used to love that, Ingmar. Days like this in the fall, just going out and finding something to do. No matter what it was. Just letting whatever happens happen when you go out into the street and meet someone. Suddenly, before you know it, you're sitting up in a tree counting to 20, that sort of thing. Childhood, Ingmar. It's a really cool time."

"Sure, maybe."

"Sorry, now I'm babbling. Do you want to sit in the styling chair, by the way? Just hop on up if you want."

"No thank you, that's okay."

"Just try it, this is a whole different thing than that office chair Leon gives you."

I felt a twinge of insult at that: there wasn't anything the matter with Leon's chair, and he was a guy I really liked and was always nice to me, even though I almost never got to talk to him.

"Leon has barber's chairs too," I said with a bit of an edge in my voice, "and they go up and down and around and around. They're really good."

"Of course, of course. I shouldn't have said that. Leon's a good guy."

I sat in his styling chair. "Can I ask you something?"

"Of course, ask whatever you want."

I thought for a moment. "Do you think there'll ever be nuclear war?"

Rolf seemed to flinch a little as he met my eyes in the mirror.

"Gosh, wow, you really don't beat around the bush!"

"Sorry."

"No, no, if you want to know something, you ask, of course. But nuclear war…no, it…in the past, maybe. When I was seven or eight, there was something called the Cuban Missile Crisis—then I remember being scared war might break out. Because the Russians might launch their atomic missiles at America, and then the Americans would respond, and then that would be the whole kit and caboodle. But after that…no. You know what I think? I think it's all about showing who has the biggest dick, that's all."

I gave a start and blushed terribly when I heard him say that word. In our household, it would never have been said, it was unthinkable. My God, our mom didn't even hang our underwear on the clothesline because she thought it'd be indecent. In our home, you never went any further than the completely harmless "willy," and even that was rare. Usually we referred to it as your "noodle." Or "wiener." If we had to refer to it at all, that is. Now that I think of it, "dingdong" may also have been another of the signifiers used in our household. "Ding-a-ling," too, I think. At other times just your "peepee," plain and simple. Usually in the context of instructions on how to wash your privates. Instructions that were mostly given indirectly and by way of vague gesticulations. Anyway, never the word he'd just used. Since then I've realized that

genitals weren't the only subject we had to find harmless, playful words for at home; no doubt, we could have put out our own phrase book.

"Do you think a lot about these things," asked Rolf as he picked up a pair of scissors from the white handcart next to him, "sort of without thinking about it, really?"

"No, not really. Or, it's just, I watched this TV show today, before I came over, about the test explosions at the Bikini Atoll, and then…"

"*From Bikini with Hate*! I've seen it too. There was a rerun today, I guess?"

"Yes, and…"

He met my eyes in the mirror again. "Just between you and me, I thought beforehand it was going to be a show about bikinis."

"Same here."

"But holy moly, then it turned out to be really interesting, you know, so I ended up saying to myself, '*Fuhgetaboutit*,' and just sat and watched the whole thing."

"Same here."

Again this feeling of being pushed ahead into life, like I'd turned into a grownup who was sitting in a salon chair having a grownup conversation with another grownup about a very grownup TV show we'd both watched. I'd imagine that around 95% of what I watched on TV and on tape as a kid were things neither of my parents cared about or had watched themselves. To some extent they followed *Dynasty* and *Falcon Crest* during those shows' runs, but I suspect this was mostly at my mother's behest, probably too because those shows got so much attention in the press. I don't remember them ever wanting to go to the movies, for example. But they took me to see *Crocodile Dundee*, I remember, after I'd begged and pleaded because all the other kids in my class got to see it and Peter's parents had even said they'd see it again just so I could go with them. When they finally took me, my parents that is, I sat in between them and really loved it, while they both held the same smiles on their faces throughout the whole movie and all the way home, which probably looked creepy to people who didn't know them that well. Not that they meant anything bad by it, the smiles were there so I could relax and have a good time, so I wouldn't feel ashamed; in the end, I think they just didn't get anything out of it, they couldn't believe in it, as if it was impossible to look past the fact that the movie, every movie, consisted of little else than people dressing up and pretending to be someone else while talking about things someone else had decided for them, and who were almost never truly sad, even as they sobbed

through scene after scene. Only the evening news could get them to sit up on the couch and pay any attention, and apart from that, they hardly had any use for the TV at all, my parents, who, if it'd been up to them, would have just had the radio and the radio would have been on the same station all day so that whatever dribs and drabs of the news reports reached their ears could complement what they read in the three newspapers they subscribed to (*Stavanger Aftenblad*, *Rogalands Avis*, and *Aftenposten*, the latter because it was so vital to know what was going on in our nation's capital) and which they read voraciously beginning at breakfast and continuing on into evening and with rising intensity over the course of the day as if they were scared they might miss something before the next edition arrived in the mailbox the next morning.

"But the forces in those things are enormous," said Rolf, making a few careful cuts to the hair on the left side of my head.

"In what?"

"Nuclear bombs."

"Yeah."

"How something so incredibly small, I mean, a few grams, how it can cause so much destruction. It's just awful. But also fascinating, don't you think?"

"Yes."

"If I can say that."

Then he seemed to be struck by a thought, which took him completely out of the room for a moment, but I remember in any case glancing up at the mirror and realizing he was giving me a full haircut. It didn't seem like a good time to say anything, but I remember thinking how it would create an imbalance in my and my father's trips to see Leon because one of us would have to wait on the other, and there weren't a lot of places we went together otherwise.

"Well…" said Rolf finally, hesitating. "It's not the atom bomb I'm afraid of…not the explosions and the destruction anyway…as I understand, the radioactivity from those bombs reaches harmless levels after a few weeks. It's the nuclear power plants that worry me, Ingmar. Another Chernobyl, only next time even worse. Radioactive fallout. Huge wastelands. Think of the poor folks who lived there, around Chernobyl, who've never gotten to go back home, and it's been more than three years. Maybe they'll never get to go back. The whole place will remain a wasteland, abandoned, until nature manages to bring forth species of plants and animals that can survive there and slowly take over the buildings. Can you imagine something like that? Having to

leave your house at Forus in Stavanger, with only a few hours' notice? Without any bombs, not a single house burned or submerged, absolutely no visible signs that anything had occurred, everything left intact, as if you still lived there, only it would be too dangerous for you to go back home and open the door to your room to retrieve your stuff. It doesn't take much for one of those nuclear plants to fall apart. He ran his fingers through my hair to get it to lie the way he wanted, before adding, in the mirror, "My goodness, listen to me talk, I hope I'm not scaring you with this nonsense. Nothing's going to happen."

But I wasn't scared at all by what he said, it was just very exciting, not least because of the way he was talking to me, just like any other client of his, making me feel I had to show him I was big enough for this kind of conversation. He carefully pushed my head to one side to get a better angle.

"It'll be okay," I said. "It's important to talk about things like this."

"It is, isn't it? I think so. You know, what I always say is, it's the things we don't talk about that ought to worry us."

"Agreed."

With my head pushed to one side, he took to clipping with greater intensity, as if an idea had taken hold of him.

"Even if it can be scary, sometimes," he went on. "But it's better to shit on the table than on the floor, at least that way you won't step in it."

Needless to say, I'm sure, we never said *shit* at home either.

"I agree completely," I said, nodding very clearly, since it seemed to be more appropriate than laughing at the thought of one of us emptying our bowels on the coffee table.

"But as long as we're talking about what's scary, I mean, if we're, you know, getting it all out on the table anyway…"

"Yes?"

"Yeah, well, I'm thinking about those cobalt bombs. Have you heard of them?"

I would have shaken my head, but due to the fear of having an eye put out by the scissors he might still be holding, I tried to shake the eyes themselves, I'm not sure why, before finally just saying: "Don't think so."

"That is a so-called dirty bomb. The doomsday machine itself. Yes, that's probably what they call it. And no one knows whether the Americans or the Soviets have one. But what it is—I

mean, if I've understood it right, and don't go betting money that I have, now," he laughed, "is a kind of atom bomb that isn't meant to blow up anything, but to contaminate large areas of land by spreading radioactive fallout. I'm not sure I know how it works, exactly, but the cobalt probably has something to do with it. It gets turned into radioactivity or something when the bomb goes off. And then it comes down like rain, making it impossible to live there for decades. Gamma rays. If the bomb is powerful enough and you detonate it high enough in the atmosphere, the entire planet could become uninhabitable. That's the thing I'm afraid of. That someone might built one of those or use it. But who would want to risk making the whole planet a wasteland, what good would that do? So I don't expect that to happen. Really, I don't. If it helps that I say that. It won't happen. As I said, I think the point of those weapons isn't to use them, but to threaten others with them. To show the other man who's strongest, who, you know, has…"

"The biggest dick?"

He laughed again and flashed a big smile while throwing up his hands.

"You got it, buddy. Exactly." Then he bent toward me again and put his friendly hands on my shoulders. "But I'll tell you one thing, Ingmar. It doesn't matter how big it is. Never worry about that. It serves the same purpose, regardless. Just ask my wife. The one with the teacher's degree and everything, so she should know what she's talking about." He straightened back up and looked up at the ceiling, as if struck by something important, before he found my gaze in the mirror again. My hair was really short now.

"A shame how few world leaders are married to teachers."

I searched for an answer, but didn't have one ready before he walked over to the other side of the room to get a can of mousse that he opened and started rubbing in between his palms.

"So, what do you think about that Kubikel project?" he asked while massaging the stuff into my hair, even though there wasn't much up there to rub into. "Since you're so interested in atomic energy, I mean." He was treating me like a grown-up man, but now I smelled like a grown-up woman.

"I'm not sure I know what that is," I said.

"For real? You haven't heard about it, the Forus Taurus? It's right down here, by the shoreline. A nuclear reactor."

That was the first time I'd heard about it. Never seen it. No one had ever talked to me about it.

"Is that so?"

"Kubikel, it's called. But it's not there to produce weapons or electricity, like Chernobyl and so on. Not yet, anyway. It's a different kind of research reactor that works in a different way, I'm not sure how. According to what we've been told, it's nothing too dangerous. Fusion is what they call it. But I don't know, I don't like it. Do you know where the old Sønnichsen building is?"

I knew of that building, having once gotten lost and ending up on the steps of a lonely little house right next to the place I'd decided to run away from home for good when I was six, with a bunch of apples and bread bound up in a cloth and tied up at the end of a stick. My father had extolled me later for having such a distinctive style of crying that carried all the way over the train tracks back home where they were on their hands and knees looking for me under the bushes in the garden. It had been a confusing day.

"It's inside their old offices. Jonatan can probably show you, if you want. But keep at a good distance, all right?"

"Of course."

"You never know with those things there. I don't want you to come home glowing or anything."

He studied me in the mirror one more time and nodded, to himself, to me, to the work he'd done that was now finished.

It was around this time, give or take half a minute, that Jonatan walked in the door with a look of deep confusion.

"What are the two of you *doing* down here?" He looked at me, looked at his father, the hairdresser. This only added to his confusion. His voice was quivering, angry. "What did you do to him?"

"What do you mean? I was just giving him a fall trim while we were waiting for you, is that not okay, or? We've been having a nice chat about a TV show we both watched and…"

"Did you even look at him while you were doing it?" yelled Jonatan. "He almost doesn't have anything left up there!"

Rolf and I looked at me in the mirror. We'd obviously both been too absorbed in our conversation.

“Is that so bad, though?” ventured Rolf. “It’s just shorter than normal. Nothing wrong with that.”

“Look at him, though! He’s almost totally bald. He looks like he’s 80 years old. You’ve given him a bad hair day for weeks on end now.”

We both had to look in the mirror again. I put a hand up to the top of my head. It was like running my hand over a doormat. I’d never had it that short before.

“Okay, sure,” said Rolf. “We could have stopped a little sooner, I see now. We were just having such a good time talking, weren’t we?”

“Yes,” I said quietly.

“And just so you both know,” said Rolf, “short hair is all the rage with American skater kids right now, on the west coast. California, you know.”

“But he doesn’t live in California, he lives in Forus! And in Forus he looks like a cancer patient.”

Jonatan walked over to me to look at my hair more closely, shaking his head and groaning. He reached up to his own hair instinctively to push it behind the ears, it was almost down to his shoulders.

Rolf got his mirror and showed me the back of my head from a couple different angles. “Do you put gel in it or anything?” he asked. “Or spray? Yeah, I don’t know, I don’t have a ton of product around here anyway.”

“Just brush him off so we can get out of here,” sighed Jonatan.

His father put down the mirror and picked up a small brush he used to dust the hair off my shoulders.

“My goodness, though, it’s no use going around sulking about it, Jonatan. Fine, his hair’s a bit short, it’s not the end of the world.”

“I like it, actually,” I said, and it was the truth. I felt like I’d become a whole new person. In my memory, it was as if he cut my hair far beyond the point where I just looked like a neatly trimmed kid, a six- or eight-year-old whom every old person would want to walk up to and give a pinch on the cheek. It was at that point Leon would put down his scissors and clap his hands twice with satisfaction, while I sat there feeling like Little Lord Fauntleroy. Rolf had given me years in exchange for hair. I got up and put my hands in my pockets, feeling like I was thirteen, at least.

"Can we just go?" Jonatan was backing up toward the door now.

Let's see, what else can I remember from that day? I remember Jonatan and I walking down the trail and the street that led from his house, to the traffic light that was there because someone, a few years previous, had run for office on the platform of installing one to prevent more children from being killed in the road on the way to school, walking past, or more accurately, over the big sundial, which some municipal agency or other had hired a group of unemployed individuals to erect on the gravel lot between two factory buildings, and which can't have done much else but give them a feeling that time was slipping away from them and always gave the time catastrophically wrong anyway and was of little value to anyone other than kids who would use its wobbly surface to hurt themselves trying to do tricks on their skateboard when the undersized—and even more dangerous—homemade skateboard ramp next to it was occupied and had a long line of folks waiting impatiently for their turn to incapacitate themselves now that the national prohibition against skateboarding had finally been lifted. We walked through industrial areas behind buildings where guard dogs stood barking at us on leashes and men in overalls told us to get the hell away from there, who didn't understand that we didn't want any trouble, that just like all other kids we liked going in straight lines and taking all possible shortcuts and that no fence could keep us from doing so, we just crawled through them, and it started raining as we got closer to Peter's house and I remember wondering whether it was acid rain, radioactive drops that landed on Jonatan's hair and my head and I remember that Peter was home, him getting dressed and joining us before we trudged down the street called Forus Gardens and under the rail bridge and that we didn't turn to the right after that, as I usually did when Mom, her face aglow, took me and my brother down to the beach to swim by the fjord just below us in the summer, while my father walked twenty meters behind us, groaning about all the stuff he was having to carry and for having to trudge along with us, instead we went left and that was the afternoon I saw the Kubikel reactor for the first time, or the building that housed it anyway, and I remember it wasn't much to write home about, but it was still impossible to go to bed that night without thinking about how just one wrong step could cause someone to blow up the whole town. Plus I remember my father's reaction when I came home and he saw what had been done to my hair.

Almost all our days were like that. 1988-1998. The same days played out again and again. I went to Jonatan's and we went to Peter's, or I went first to Peter's and we went over to

Jonatan's. And each summer I took a daily route between their houses and rang the doorbell, because I'd forgotten how long they would be on vacation. Sometimes it would also be one of them who rang my doorbell, but only seldom did we stay at my house, it seemed like there was no place we could be there, the rooms were too small, my parents always coming and going. Later, when Ebba came into the picture, we were all teenagers, but we almost never went over to her place either, since she usually took the bus out here and we wandered for the most part around Forus, but it felt like we went everywhere and covered great distances, even though we never actually went anywhere and the map we navigated by was microscopic, stretching only four or five kilometers in either direction, because we were a little bit older now, but still had a feeling we could be called at in any time, so we stayed close by, within earshot, walking through the streets and down by the fjord and over by the Kubikel reactor and it won't be long now before we'll be back, after all these years, but we aren't keeping an ear out anymore and no one will call after us anymore, can you hear it, how quiet it's become? How the air almost crackles?