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Katalin Karikó

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Breaking Through

A MEMOIR



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‘A riveting testament to resilience and the power of unwavering belief’ Jennifer Doudna

An Amazon Best Book of the Year, *Nature*
Best Science Book of the Year and *Financial Times*
Best Book of the Summer 2024

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KATALIN KARIKÓ

KATALIN KARIKÓ is a biochemist and winner of the 2023 Nobel Prize in Physiology or Medicine. Her pioneering research was the foundation of the Pfizer-BioNTech and Moderna mRNA vaccines against COVID-19. Since 2020, she has been awarded over a hundred prizes in recognition of her work; two children's books have been written about her and a minor planet named after her. Now an honorary professor at numerous universities around the world, she continues in her work to advance new medical treatments where the need is most urgent. She and her husband Béla are the parents of two-time Olympic rowing champion Susan Francia.

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KATALIN KARIKÓ

Breaking Through

A Memoir

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PREFACE

ON HER FINAL DAY OF SECOND GRADE, MY DAUGHTER, SUSAN, came home from her public school in suburban Philadelphia, sat down at the table, opened her backpack, and pulled out a pencil and piece of paper. She began to write, her brow furrowed in effort and concentration, an expression I would see again and again as she grew.

I asked Susan what she was writing. Without looking up, she answered, "I'm saying thank you to Mrs. Wilson for teaching me so much this year."

I stared at her. Susan kept her eyes on the page, forming her letters carefully. Her hand moved steadily across one line, then she started a new one.

I didn't do that, I thought.

I never did that. Never once did I write to any of my teachers to thank them.

It is my hope, then, that this book can serve as a long-belated thank-you. Let this be one way to tell those who took the time to educate me—all my teachers and mentors from my earliest days in Hungary right through to the world-renowned experts in cardiology, neurosurgery, and immunology who allowed me to work by their side—that everything they did mattered.

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From teachers, I learned the basics, my foundation.

From teachers, I learned how to take the next step: to question, to wonder, to explore, to think for myself.

From teachers, I learned how to go beyond even that: to use what I knew to make my own contribution.

It was the work of teachers that allowed this child of two laborers in postwar communist Hungary to understand the world . . . and then, in her own way, to help change it.

One doesn't grow up in an agricultural community—or, for that matter, become a biologist—without developing a healthy appreciation for seeds. Seeds are potential. They are promise. They are sustenance. Seeds are the difference between a bleak future and a bountiful one. Planting a seed is, in every case, an act of conviction, and of hope.

So thank you to my own teachers. Thank you to educators everywhere. You are planting seeds.

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PROLOGUE

A WOMAN SITS DOWN AT A LAB BENCH. FROM THE OUTSIDE, the scene may not look like much. The stool she sits on—inexpensive, a little creaky—rolls along the hard floor. The counters are made from something hard and durable—steel, maybe, or epoxy—and are covered in paper to absorb spills. There's some equipment near her—a bench-top centrifuge, a stack of square plastic assay trays, a vortex mixer, a hot plate, an incubator. To the untrained eye, these things may resemble the ordinary appliances sitting on counters in most American kitchens. *Something for heating, something for cooling, something for freezing, for mixing, for cleaning.*

Perhaps a nearby window lets in a bit of natural light; maybe not. Above the woman's head, fluorescent lights are humming. The scene contains nothing glamorous.

Maybe the woman is the first to arrive. It's still early, and the sun is just appearing on the horizon. She reaches for a pipette, a reagent bottle. She begins.

She'll sit for hours without getting up. She may just sit for forty years.

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If you were watching the scene from the outside, you'd grow bored, and quickly. And who could blame you? *She's*

just sitting there. From the inside, though, it's a different story.

The woman's body may be still, but her mind is whirling, filled to overflowing with big ideas. She glimpses a line from the work she's doing to breakthroughs that may someday change lives. She does not know if she herself will make these breakthroughs or if someone else will. She does not know if she will live to see them. These questions don't matter.

The work, the *doing*, is all that matters.

The woman makes progress one step at a time. She measures, she pipettes, she pours, she starts up the centrifuge. She focuses, trying to notice everything. The work is tedious, but this is not tedium. The truth is, she feels like a detective, like Columbo—her eye about to land on that one tiny detail that's going to crack the case wide open.

Forget how the scene might look to an observer. The woman knows that *this*—this nondescript lab with its metal rolling seat and humming lights on an ordinary day—is filled with possibility.

THE CELL, TOO, IS different from how we often imagine it.

If you've made it through a basic biology class, you know about the cell: the fundamental unit of life, the building block of everything alive. Chances are, you also know the cell's rough architecture. For eukaryotes, which is to say nearly every living thing you've ever laid eyes on—and plenty more you'd need a microscope to see—that architecture goes something like this: A plasma membrane surrounds a gelatinous liquid called cytoplasm, in which various organelles float. At

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the center of the cell is a nucleus stuffed full of DNA. Going by the way some textbooks present the cell, one can almost imagine that it's a bit like a backyard pool, with inflatable toys bobbing around, just waiting for something to happen.

This couldn't be further from the truth.

Every cell is like a sci-fi city that never sleeps. It thrums with activity. Nearly all of your cells contain staggeringly sophisticated factories that manufacture thousands of products via round-the-clock assembly lines. Labyrinthine transportation systems make even the most complex human highways look hopelessly obsolete. Packaging and shipping centers run more efficiently than DHL, power plants generate vast amounts of energy, and waste-treatment centers ensure nothing unnecessary hangs around and nothing goes to waste.

Inside your cells, complex codes are encrypted, sealed, shuttled, decrypted, and then broken down. Only with the touch of that one special key do locked gates open and close. Surveillance networks watch for invaders . . . and pounce when they find one. It's an incomprehensible amount of biological activity, and it's going on all the time, in every one of your trillions of cells.

Since you've begun reading this book, your cells have pumped, hauled, stacked, transported, transcribed, decoded, constructed, destroyed, folded, blocked, received, and expelled. Through these actions, you've breathed, digested, and sent oxygen and nutrients to every remote corner of your body. You've made electricity, interpreted vibrations in the air. You've thought, perceived, contracted muscles, and detected and fought off legions of pathogens you'll never see.

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You have, in other words, been alive.

I tell you all this because understanding my story, understanding *me*, requires that you first understand something else: that what may, to some, look like stillness—that quiet woman at her bench, those floating pool toys—is sometimes the opposite.

Sometimes a complex and satisfying life—or the complexity of life itself—can look, to others, like nothing at all.

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PART

ONE

A Butcher's Daughter

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There is a story my family likes to tell: a moment I cannot remember. I am a toddler, still chubby-cheeked, with a blunt blond bob. I am standing in the yard of my childhood home. In front of me, my father has begun butchering the family pig. This is his work, his vocation. He is a butcher. It's how he earns his livelihood, and it's how he keeps us alive. He's been doing this work professionally since he was twelve years old.

The dead animal lies on its back atop a platform of bricks, which keep it from getting muddy. My father singes the fur with a handheld wood burner, similar to a blowtorch. He slices open the long belly of the animal, reaches into the cavity. He scoops out innards, working carefully so as not to puncture the organs. Lumpy intestines glisten. Then he lifts a hatchet and hacks the animal into two equal halves at the spine. Now what lies in front of me seems less like an animal, a being, and more like a product. At last, he begins dividing the carcass into bright red cuts of muscle.

This scene is too much for my sister, Zsuzsanna, three years older than me. Zsóka, as I call her, is not squeamish. This is postwar Hungary, after all. Squeamishness is a luxury afforded to no one—let alone a hand-to-mouth laboring fam-

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ily like ours. But whatever it is that has captivated *me* in this moment does not seem to have the same effect on my sister.

Still, I *am* captivated.

My parents used to chuckle, remembering the way I looked then: my wide eyes taking everything in—the whole complex topography of an animal's interior. All those disparate parts that for so long worked together to keep this one creature alive. All the mystery and wonder they seemed to hold, visible at last.

This, for me, is how it begins.

WHILE I CANNOT REMEMBER those early moments seeing my father work, I recall, precisely, the world that surrounded them, the landscape of my childhood.

Kisújszállás: central Hungary, the northern great plain region. Clay soils. Sweeping grasslands. A medium-size agricultural town of roughly ten thousand people. We aren't as isolated as some towns; we're a stop on the railroad, for one thing. Also, Route 4, a primary route to Budapest, goes through town. There are a few paved streets, though my family's road is made from packed dirt.

Our home is simple, small. It is constructed, literally, from the earth that surrounds it: clay and straw, pressed into adobe walls, whitewashed, then covered with a thick roof of reeds. The reeds, as I remember, have faded in the sun. They look like a shaggy gray wig.

We live in a single room. The house is larger than this one room, but for most of the year, the other rooms are too cold for anything but storage. We live where the heat is.

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In a corner of the room is the source of that warmth: a sawdust stove, the cheapest possible way to generate heat. It's constructed from sheet metal, about a half meter across, like an ordinary metal barrel with a central cylinder that is packed with sawdust. We collect that sawdust from a nearby wooden toy factory, carrying it home from the factory with the help of horses. Once home, we store the sawdust in the barn, in a pile taller than my father. In the summer we check the pile regularly to make sure it hasn't started generating its own heat; sawdust is known to spontaneously combust.

The sawdust stove grows hot enough that my mother sometimes uses it as an extra cooktop. When it really gets going, the exterior metal glows red. Zsóka and I long ago learned to keep our distance, lest we burn our skin. It's our job, though, to fill the insert container with sawdust every morning. This is hard work, and it must be done carefully. Like many of the things we do, it isn't a chore—at least not in the sense that people use the word now. It's not something that our parents *ask* us to do, not a favor we're doing for the family. It's simply what *must* be done. If we don't do it, our family will freeze.

At the center of the room is a large table. Here we prepare and eat meals, sometimes gathering extended family for boisterous celebrations. At this table, my sister and I do homework and read, help our mother roll out fresh pasta from flour and eggs.

Each night, my father stands at the head of the table, doling out dinner servings to each of us. He served in the army during World War II and cooked for hundreds of soldiers on the front line, rationing foods with precision. I can still see him

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today: He ladles pasta into his own soup bowl. "Soldiers during the war on the front lines!" he hollers. Then he reaches for my mother's bowl. "Soldiers during the war in the back country!" Then he reaches for my bowl, then my sister's, giving us kids the smallest servings. "Soldiers during peacetime," he says quietly.

Then he laughs and serves us all a little more. Times might be hard now, but he's known worse. Every adult has.

Nearby are the beds where we sleep: mine and Zsóka's, our mother and father's. The beds are so close, we can reach out to touch one another during the night.

Outside is not only my father's smokehouse (where sausages hang, dripping thick globs of fat, stained orange from the paprika, onto the floors) but also the barn, where, already, a new pig is growing. Next year's meat. In the yard, chickens peck the earth, and we have several gardens. In the main garden, we grow food for our family: carrots, beans, potatoes, and peas. Dinner is made from whatever happens to be ready for harvest (flavored, like the sausages, with paprika—always lots of paprika). Zsóka and I have a garden of our own, too. Every spring, we place seeds in the ground. Our fingers are still clumsy, but we are gentle as we work. Gently we cover these seeds with soil, then—weeks later—watch shoots push their way into open air and stretch toward the sun. We also grow fruit. We have apple, quince, and cherry trees, plus a grape arbor and pergolas.

And there are flowers, too: blue hyacinths, white daffodils and violets, and great bursts of roses, which together make this humble homestead feel a bit like Eden.

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Someday, decades in the future and an ocean away from

here, in a land I haven't yet heard of called Philadelphia, I'll settle down in a home on a wide suburban street. There I'll go in search of flowers to plant, and it is only when I struggle to find white daffodils that I will understand what I'm doing: searching not just for any blooms, but for *these,* the flowers I knew as a little girl, the ones I can remember my mother planting and tending.

Outside of town lie fields of corn. We plant this corn ourselves, using hoes to soften the soil and cut the weeds. We thin the plants, pull weeds from the soil, fertilize the ground with cow manure, and then harvest the crops. We give the kernels to the animals, then use the cobs to fuel the kitchen stove.

Everything is like that: Nothing goes to waste. We shake walnuts from trees, eat the nuts, and burn the leftover shells as fuel.

It will be years before plastic becomes a part of my life, years before I understand the concept of garbage, the idea that some things are so useless they can simply be thrown away.

WE DON'T HAVE A cow, but our neighbor does. Every morning, my sister or I run over to the neighbor's home with an empty jug. We fill the jug with milk still warm from the udder and serve it for breakfast. Leftovers become kefir. When we rinse the last milk from glasses, we pour the cloudy water into a pot for the pig, who devours everything greedily.

As we scurry around, getting ready for the day (the indoor air so cold our breath is sometimes visible), we listen to a small radio. Each morning, an announcer tells us whose "name day" it is. Every day of the year, a different name, a different person

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in our lives to celebrate: February 19, *Zsuzsanna;* November 19, *Erzsébet*. *Good morning,* the voice on the radio might say. *It's October 2, which means it's the name day for Petra. The name comes from a Greek word that means stone, or rock*. . . . Then, when we arrive at school, we know whose name day it is, and we wish them a happy one. It's a good system. How many of us really know the birthdays of the people in our lives? But if you know someone's name, then you know their name day, and can wish them well.

FOR THE FIRST DECADE of my life, we use an outhouse. At night—especially in winter—we pee in a chamber pot. Nearly everyone I know, at least in these early years, does the same.

There's no running water of any kind in our house. In the yard, we—like all the families on our street—have a well. Sometimes, I lean over the edge, staring down into the darkness, feeling the cool, wet air on my skin. In the summer, this well becomes our refrigerator. We lower our food to the water's edge to keep it from spoiling. In the winter months, the whole house becomes our refrigerator (in the coldest months, we store eggs beneath our beds to keep them from freezing).

We use our well water for animals or for watering plants. This water is too hard for bathing and washing, and it isn't potable, so each day my father walks to a nearby street pump, carefully balancing two thick buckets on a wooden rod. Zsóka and I follow him, carrying water home in smaller containers. Once a week, we heat this water, pour it into a shallow tub, then bathe in it.

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At the community pump, neighbors exchange gossip, dis-

cuss the day's news, share everyday joys and frustrations. This pump is, for me, the original watercooler, the first chat room.

Occasionally, a man rides up our street on a large horse. He bangs a drum loudly, calling us all outside to hear whatever announcement he's brought from the authorities. This is another, more official news source—what some communities call a griot or a town crier.

"Next Tuesday," the man might bellow, "there will be a preventive vaccine campaign for chickens! Keep your chickens indoors on that day so that they each might receive their vaccine!"

We make note of the information, then carry this news to the water pump when we go. Everyone repeats the announcement, in case anyone missed the man's visit: *Did you hear the news? Chicken vaccines. Yes, next Tuesday. Keep your chickens indoors.*

And, sure enough, when Tuesday comes, students from the veterinary school enter our yard. Zsóka and I catch our chickens in the hatch and hand them over, one at a time, to the man who will inoculate them—my first-ever vaccination campaign, I suppose.

SCIENCE LESSONS ARE EVERYWHERE, all around me.

I climb trees and peer at birds' nests. I watch hard eggs become naked hatchlings, mouths wide and begging. The hatchlings grow feathers and muscles, leave their nest, begin pecking the ground. I see storks and swallows take flight, then disappear when the weather grows cold. In the spring, they return and start the cycle all over again.

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In the smokehouse, my sister and I collect fat drippings with a spoon. We drop the fat into a pot; when summer comes, my mother calls a woman to the house. She's ancient, this woman, carrying knowledge passed down through generations. Under this woman's direction, we melt the fat, then mix it with sodium carbonate, using a precise ratio she alone seems to understand. Then we pour the mixture into wooden boxes padded with a dishcloth and wait for it to harden into soap, which we slice with a wire. We use soap bars for bathing and shave some into flakes for laundry.

Looking back, I understand now that this local "soap cooker lady" was the first biochemist I ever met.

Another lesson: One summer, our potatoes are infested with a pest, *Leptinotarsa decemlineata*, known in the United States as the Colorado potato beetle. The insects lay eggs, and larvae explode across the garden, eat away at stems, and turn entire leaves to lace. They'll destroy the whole crop if we do nothing. My parents put me on potato beetle duty. I scour the plants, plucking insects one at a time, dropping each into a pot. Each bug is about half an inch long with a spotted head and dramatic black and white stripes on its backside. The bugs themselves don't especially bother me, but when I miss one, it lays clusters of eggs, from which erupt disgusting pink larvae, wriggling and sticky. I pluck those, too.

The work is tedious and sometimes gross. But it provides me with an early education not only in entomology but also in ecosystems. For here, too, nothing goes to waste: I feed these pests to the chickens, who are delighted with the bounty. Potato beetles feed the chickens, who in turn feed us: a lesson in the food chain that becomes, quite literally, a part of me.

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THERE'S NO END TO the work to be done. My sister and I carry water to chickens and gather their eggs. On the rare occasions when our family chooses to cook one of our precious chickens, we chase that bird down with a broom and scoop it up. We wash dishes and clothes by hand. Twice a week, my grandmother, who lives a half-hour walk from our house, cuts bunches of flowers from her garden—*labdarózsa* (snowball bush), *török szegfű* (sweet Williams), *rózsa* (roses), *dália* (dahlias), *szalmavirág* (strawflowers), *tulipán* (tulips), *kardvirág* (gladiolus), and *bazsarózsa* (peonies)—then hauls them to sell at the market. We help her cut and prepare these flowers for sale.

Even if my grandmother hadn't told me the names of these flowers, I would have learned them by heart. In fifth grade, I receive a book about the flora of Hungary; the book features gorgeous watercolor illustrations by Vera Csapody, a Hungarian woman botanist and artist. I am obsessed with this book; hour after hour, I turn the pages, memorizing the bright bursts of colorful petals, the spindly root threads emerging from rotund bulbs, and the precise variegations and striations of leaves.

IN OUR ONE ROOM, we have a bit of electricity; this affords us a couple of electric lights, as well as a record player and radio. My parents love music, and my mom often puts on a record while preparing dinner or baking. She can bake anything, and her cakes are exquisite: moist, delicious, and immaculately

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decorated. One of my favorites is lúdláb, goosefoot cake, a sponge cake layered with cream filling and raisins and covered with chocolate glaze.

Zsóka is better in the kitchen than me. By the time she's ten years old, she can bake entire cakes by herself. I'm clumsier in the kitchen, and less interested. Early on, we fall into our respective roles: I start the fire, she does the cooking, then I do the dishes.

Father also loves music. He's fond of Imre Bojtor, an operatic tenor, and Magyar nóta, a form of traditional Hungarian song. My father has a terrific voice and a gift for melody; he can sing beautifully and play the violin and the zither. He's always belting out some tune or another.

He's tried, on many occasions, to give my sister and me his gift for music, but neither of us has the ear; we can't carry a tune, and our fingers are clumsy on the violin strings. We enjoy listening to music, though. Like everyone we know, we love a band called Metro, led by the singer Zorán Sztevanovity, who is a bit like a Hungarian Roy Orbison. But making music? We just can't seem to do it. At some point, our father gave up and continued making music without us.

My father has other gifts, too. He can multiply two-digit numbers in his head, giving you an accurate answer immediately. My sister and I test him throughout our childhoods, and he almost never makes a mistake. This, too, is a lesson for me, one that goes well beyond mathematics: Intelligence and education are not the same thing. A person may lack prestige or a diploma but nevertheless have a swift mind.

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For much of my life, I assume that everyone knows this,

that this fact is so obvious it isn't something that needs to be learned. Only later, when I begin to work in academia, will I come to understand this isn't the case—not at all.

WHEN I AM NINE years old, my parents buy a crumbling, hundred-year-old mud-brick house. It is too decrepit to live in but can be taken apart, board by board, so that its parts may be saved for a new home.

Over the course of one summer, my sister, father, and I do exactly that. We collect all the nails that affix the slate to the roof. These ancient nails are made from bronze and are far sturdier than any of the cheap aluminum nails we can get in the store. My sister and I hammer each one straight so that they can be reused. We also take slate tiles from the roof, clean them, and place them in neat piles for later. We sand old boards, then lay them down again. In a big pit, we mix clay with straw and water; this becomes the mud that my father will use to cover and smooth the walls. Because I am the smallest, I climb onto the roof and wedge myself into the hardest-to-reach places. I nail down ceiling boards, smoothing mud over them, just as my father showed me.

By the time we finally move into this house, when I am ten, there isn't an inch of it that I don't know by heart.

But is all of this really work? Or is this just life?

Certainly, we children have hours of play—on our packed-dirt street, there are many kids our own age. In the summer, we play shop. Since I am the little one, I play the customer, while my sister and the other girls her age are the merchants.

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Or we play school—they are the teachers, I the pupil. I work on the assignments they give me with painstaking care, as if it were a real school.

We play in snow in the winter, and when big rains fall in the summer, we splash through the water-filled ditches in our street.

But I, and likely every child I know, couldn't tell you the exact place where work ends and play begins, where responsibility and pleasure cleave. The boundaries between these things are hazy, indistinct. We toil and we enjoy. We contribute and we receive.

And of all my early lessons that prepared me to be a scientist, that one, I think, is the most important of all: that work and play can bleed into each other, become one and the same, until the very idea of their distinction feels meaningless.

IMAGINE A STOREFRONT, a small butcher shop in a quaint Eastern European downtown. A winter morning. Children are gathered outside, their faces pressed to the glass of the display window. What are they looking at?

Move toward them, your feet stepping over cobblestones, and see for yourself. Inside the shop, someone has created a snowscape: a winter scene, not unlike a gingerbread house. But rather than being made from baked goods and confection, this display is constructed entirely from meat. There's a snow-covered roof, made from white lard. A fence made of sausage links. Icicles formed from the slow drip of beef fat.

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My father, the butcher, has created this scene, along with the shop owner.

I never saw this window myself, though as a child I loved to imagine it. My father described it for me, explaining how children came from all over Kisújszállás to gaze at it. I could picture the whole scene, almost as if my own nose were pressed to the window, my own breath forming translucent circles on the glass.

By the time I came along, the shop no longer made such displays.

My father began apprenticing as a butcher at age twelve. He had attended school for a while, but by 1932 had finished his compulsory sixth-grade education. That's when he started learning to butcher from a local master. Later, he would leave home, for Budapest, to learn more about this trade. *If you know how to provide people with meat,* his mother had told him, *you will never starve.*

This reasoning was neither hyperbole nor paranoia. This was the aftermath of World War I, when famine swept across the entire European continent. Hungary, on the losing side of the war, had been devastated in every way a country can be. Throughout my father's childhood, starvation nipped at his heels, just as it nipped at everyone's.

My father: János Karikó. That's the name by which I always knew him, anyway, although he'd been born with a different name entirely. Karikó had been his mother's maiden name. She'd married a fellow named László Balogh, who, like so many Hungarians, fought in World War I. He left Kisújszállás in 1917, never to return. Soon after he left, my grandmother went to work for a wealthy family. This family had young adults, including a son who happened to be approximately her age.

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Then, in 1920, my father was born.

I'll reiterate: Her husband left for the war in 1917, and her baby was born in 1920. You can do the math.

My grandmother's legal in-laws, the Balogh family, wanted no part of this scandalous child, born out of wedlock. Neither mother nor child, they believed, deserved the Balogh name. Similarly, my father's *biological* family—my grandmother's employer—wanted nothing to do with them, either. So, ten years after my father was born, my grandmother changed my father's name to Karikó.

Never mind that he was already enrolled in school, that his friends and teachers knew him as Balogh, or that this is the name by which he knew himself. Karikó it would be.

It was a lesson my father picked up early: Things can shift suddenly. It's important to stay nimble.

IN BUDAPEST, AS A teenager, my father learned his trade well. He returned home happily at age eighteen, settling into his job at what seemed like an ideal butcher shop, right in the center of Kisújszállás.

My father loved that shop. The shop owner wanted only the best for his customers—not only in meat cuts but in everything. Before the man had opened the business, he had traveled to Italy, seeking the most beautiful hand-painted tiles, with which he decorated the shop walls. The man knew quality when he saw it, and my father did quality work.

Together, they ran a strong business. They selected only the finest meats and sliced and wrapped and tied their products with care. They treated customers well and earned loyalty in

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return. That's how things were back then, my father insisted: People took pride in their work. I could *hear* that pride as my father told me these stories. But I also heard wistfulness.

That's because by the time my father described any of this to me, the world was very different.

IN 1940, SHORTLY BEFORE World War II broke out, my father had to enlist in the Royal Hungarian Army. By the time he returned to Kisújszállás, nothing was the same.

In the years immediately following World War II, Hungary saw some brief experiments with democracy. But by 1947, the Communist Party had openly assumed power. The Party nationalized manufacturing, education, banking, and transportation systems. It collectivized land. It seized homes that were deemed too grand, forcibly removing homeowners and moving in multiple families. Private businesses became public property. The butcher shop where my father worked, the store that he loved, was seized.

All that work. All that care. It vanished practically overnight.

For most of the eleven-year period after the war, Hungary's leader was Mátyás Rákosi, a fervent Stalinist and totalitarian (he would proudly declare himself "Stalin's best pupil"). These were dark times. Rákosi filled communities with secret police. He encouraged people to spy on their neighbors, to report them for crimes against the Party. He presided over mass arrests, sham trials, and the executions of political "enemies." An estimated hundred thousand citizens were imprisoned; still more were sent to forced labor camps.

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Oh, and one other change from this time: The Party seized what farm animals remained after the war, strictly prohibiting the domestic slaughter of pigs or cattle. To raise meat privately or to butcher it became a crime that carried severe prison sentences.

Meat—my father's vocation—was now a state monopoly.

My father—whom the community had taken to calling, affectionately, "Uncle János"—began to work in the butcher shop of our local agricultural collective. There were many such collectives across the country. Each collective pooled its land and labor, growing and harvesting crops (such as corn, wheat, or rice), or raising and butchering animals as a common entity. Some portion of the collective's harvest would be rationed among members; other portions were bartered for crops (apples or sugar beets) grown by other collectives.

Officially, my father now did his work for the collective only. But the truth was, the collective didn't meet families' food needs. There were often shortages. Whatever the rules, people needed to eat.

In homes everywhere—not only in Kisújszállás, but throughout the country—people continued to keep farm animals, but they did so out of sight. My father went underground. He continued butchering animals privately, but for a few years after the war, he did it in secret, working only for families he trusted, usually under the cover of night. This was dangerous; one had to be careful. You never knew who might be watching.

To minimize risk, children watched the street while the processing took place. If anyone approached, the kids ran to warn the adults so that they could hide the evidence.

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