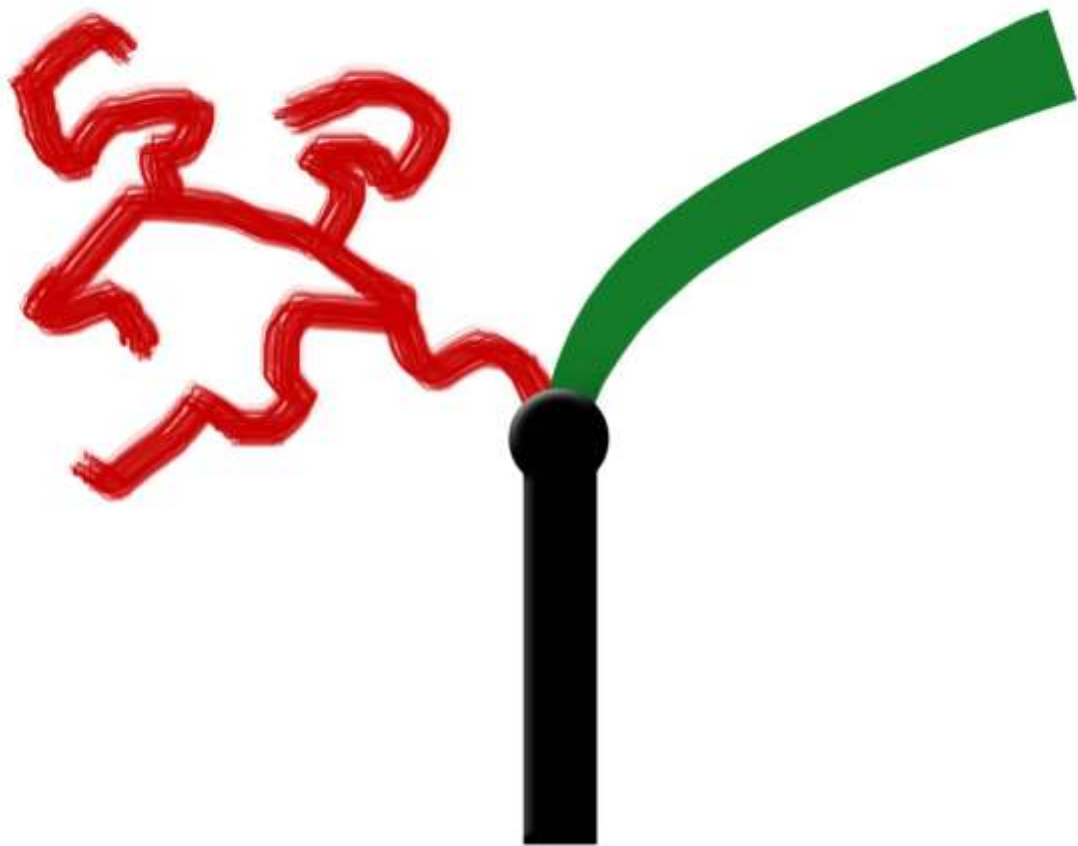


RISE UP AND ROAR

We have a choice:

The greatest
achievement
in human history,
or centuries of chaos.



John Slade

Rise Up and Roar

John Slade

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ISBN 978-1-893617-79-7

ISBN 978-1-893617-80-3

Book Design by Helena Hegstad Diamantis

Website Design by
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The characters portrayed in this novel are fictitious.
No identification with actual persons is intended or should be inferred

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This book is dedicated to the

Cradle of Life

The only planet of its kind
as it circles a star
in the vast emptiness
of our corner of the universe.

The Global College of Democracy

No one ever started a war over a wind turbine.
The wind belongs to all of us, not to nations, nor to stockholders.
The wind, and the sun, would teach us to share, not to hoard;
Would teach us to learn from each other, not to stifle ingenuity.
The wind would bring our global children together as together they master
The challenge of clean energy.
The wind, the sun, do not call foreign children “collateral damage.”
The wind would give our spirits a genuine frontier, better than the moon,
For both the challenge and the blessings would belong to all of us.
The wind and the sun know no trade barriers, no ethnic hatred.
They are waiting for research institutes and local factories
To spring to life in Africa, in Syria, in Nepal.
The wind and the sun knock on all doors equally.
We quarrel over oil, and claim to fight our wars for democracy.
What is more democratic than the wind turning turbines for all, equally,
Providing electricity for all, equally,
And thus jobs and classrooms for all, equally?
Let us learn, equally and together, how to build
A clean and prosperous world.
No one ever fought a war over a wind turbine.

Volume I

**And Neighbor Shall Reach Out
To Neighbor**

The Big Picture

It was a completely unexpected tipping point. People around the world rose up and roared. The iconic poster was a picture of planet Earth with the words beneath it, “No more killing.” Of the Earth, or of the life that lived on it.

It was as if the peoples of the world suddenly—and deeply—understood that *they* must protect Mother Earth. And each other. No more waiting for the politicians, who stumbled and bumbled with their baby steps toward some vague better future.

But it was something more than just understanding. It was *instinct*. We finally reached deep inside, and found the *best* that was in us.

I was born in the year 2000, the millennial year, a year of so much promise, so much hope. But by the time I was twenty years old, a university student, that promise had been beaten and battered by wars which had created 65 million refugees. By oil companies that absolutely refused to quit; they now had their sights on the Arctic. By a hideous president in America who launched a new arms race, American nukes against Russian nukes. By racism which threatened to poison the 21st century as much as it had poisoned the 20th. And above all, by the droughts that were spreading around the planet, by the storms that became more and more powerful, by the wildfires that burned the forests of the world . . . while the politicians dithered and counted their profits.

The Century of Hope began with twenty years of the Same Old Shit, until the women, and the young people, and finally *all* of us, rose up and roared.

Now that I am a grandmother of 78, with a daughter of 53, and twin grandsons of 18—two vibrant boys who inherit 58 years of progress unprecedented in all of human history—I feel that I should go back to those early days and tell the tale of grief, and outrage, and finally, *finally*, unstoppable determination. We want our young people to know what we are placing into their hands, so that they and the others of their generation will value what they inherit. Will treasure what they inherit. So that they will never, never, *never* go back to the Old Shit, ever again.

Yes, I shall speak, going back, far back, to the time when I was seventeen, a bored teenager in high school. My mother took me to a Greek island . . . where I held a dying child in my arms.

I shall speak as well about a Sami student at the University of Oslo—a young woman born on the Arctic tundra—the daughter of reindeer herders who was now a law student three years ahead of me. In May of 2019, Aili Biriita Gaup gave an unprecedented lecture in the largest auditorium on campus, launching the most successful global movement in all of human history.

I shall speak about harnessing the sun and the wind, those reliable heroes of the 21st century.

I shall speak about our struggle to close the last coal mine, and to cap the last oil well . . . a struggle that took us right to the brink.

I shall speak about the determination of the peoples of the world to end all wars—forever—and *doing* it.

And I shall speak about the Renaissance of the 21st century, when we all became better people . . . than we had ever believed we could be.

So many history books have been written—some were sacred scriptures—in which men dominated every chapter and verse. The women and children were barely visible at the fringes of the stage, while the men strutted and fought and gave bold speeches. Our story will be different. Our story, the story of the 21st century, brings a new *dramatis personae* onto the stage.

It took a long time for the Old Boys to step aside: a generation at least, in some places, two.

But by the time the most recalcitrant warlords finally laid down their guns, we had changed the world . . . forever.

Part I

A Purpose

Chapter One

Yes, when I was seventeen, my mother took me to a Greek island, where I held a dying child in my arms.

I was a very normal seventeen-year-old Norwegian girl, which is perhaps why my mother was worried about me. I thought the entire world was inside my Smartphone, which I clung to like an electronic teddy bear. I was as much aware as the other kids of the wars somewhere out there in the world, of the refugees who brought all their problems to our quiet little country, and of this thing called climate change, which our teachers talked about in school, just enough to scare us. So we teenagers turned to the sanctuary of our Smartphones, where with a flick of our fingers we could choose our preferred reality.

My mother, Sofia Alexandra, a nurse who worked with premature infants in the maternity ward at the National Hospital in Oslo—she kept those tiny babies alive in their little incubators—had reached her limit with my blank stare at the little screen on my telephone. She announced in November of 2017 that during the Christmas vacation—from December 20 to January 5—we were going to spend two weeks together on the Greek island of Lesbos, working as volunteers to help the refugees who arrived on the beaches in their little rubber boats.

I stared at her in the kitchen, my phone in my hand. “We’re going to *what?*”

She explained with a calm and determined voice—no longer her exhausted and exasperated voice—that she had signed us up as volunteers with the Norwegian organization, Drop in the Ocean. We would be part of a team of about twenty people, most of them Norwegian but some from other countries, who were trained to meet the boats filled with refugees as they arrived, to administer first aid, and to work in the camps when we were not out on patrol. Drop in the Ocean required that volunteers must be at least twenty-five years old, but since I would be with my mother, a nurse, I had been accepted into the program.

Then my mother stared at me, waiting for my reaction.

The truth was, that I was bored—utterly bored, bored, bored—with high school. Most of what I looked at while surfing on my phone were places I wanted to visit: I wanted to ride a red double-decker bus through London, I wanted to visit a cathedral in Paris where I could look up at the stained-glass windows, and I wanted to ride a

trolley-car up and down the hills of San Francisco. Maybe ride an elephant in . . . some far-off country.

The little town where we lived, half an hour by train south of Oslo, was very nice, very tidy, very quiet, very safe, and so utterly, utterly boring.

And the weather was gray, especially in the winter. Cold and gray.

A beach on a Greek island? At the very least, I could buy a Greek t-shirt, pink, and wear it to school in January.

So I said, “All right. But what can I do with a bunch of refugees?”

She smiled. “You’re the night owl. Sometimes we’ll be out on patrol at night. The little boats cross the sea at night when the Turkish coast guard can’t see them. When the refugees approach a Greek island, they shine the lights of their telephones toward the beaches as a signal.” Then she laughed. “You can shine your light back, letting them know that we have spotted them. You can finally put your phone to good use.”

Yes, well, I could do that. And a beach on a Greek island at midnight . . . well, that was certainly more intriguing than life in a town that shut down at ten.

I tried to smile, letting her know that I was grateful. “All right. Maybe we should learn some Greek before we go.”

“And Arabic, Sweetheart. We’re going to need to learn some Arabic.”

So on December 19, my mother and I, accompanied by my father and brother, took the airport train north to Gardermoen, where we would board an SAS flight to Athens. I must admit that I was excited. My brother would be hanging out for two weeks in all the usual places, while I was getting a suntan and eating Greek yoghurt and . . . helping the refugees.

I was also very glad, though I didn’t say so, that my mother and I were friends again. No more arguing about the telephone; it was in my carry-on, and I left it there. No more arguing about my grades. No more arguing about my refusal to wear a nice, traditional Norwegian ski sweater. (Like all the other kids, I had three favorite colors: gray, dark gray, and black.)

Whatever it was we were doing, my mother and I were together on an adventure. We had a book of Beginner’s Greek, and we had a book of Beginner’s Arabic. I felt a glow of happiness, the first for a long, long time.

* * * * *

The people with Drop in the Ocean—the “Drops”, as they called themselves—were wonderful. My mother and I were a little tired by the time we finally arrived at the hotel on the northern coast of Lesbos, but we were welcomed by a jubilant group of people who were making a taco dinner in the restaurant kitchen. They helped us to carry our bags to our room, and explained that if you wanted a really *hot* shower, it was best to try at eight in the morning. Then they led us back to the dining room and into the kitchen, where I was soon working with a woman from Poland, cutting up the most gorgeous red tomatoes I had ever seen in my life.

So much more I could say, but really, we need to get to that beach at night when I—yes, it was me, with my owl’s eyes—spotted a faint speck of light maybe three hundred meters out from shore, surrounded by the darkness of a cold December night out on the Aegean Sea.

My mother was driving the little blue car that she had rented along a bumpy, rutted road that wound along at the top of a cliff overlooking a narrow black beach far below, and overlooking as well the broad black expanse of the sea. We were heading west, so that I, in the passenger seat, could look north out my open window, sweeping my eyes back and forth across the dark sea. In the distance, ten kilometers away, I could see lights scattered along the coast of Turkey. Occasionally I spotted the lights of a ship, or a fishing boat heading out before dawn. The night was cold—we had the car’s heater on full blast—but I had to keep my window open so that I could see—

“Mom, I saw a light!”

“Where, Honey?” She slowed to a halt, then looked out my window.

“Straight out. Maybe three hundred meters. Can you see it? A tiny speck of a light. It’s moving. Yes, I can see that it’s moving.”

I snapped off my seat belt, swung open the door and stepped out carefully—the road was close to the edge of the cliff, with absolutely no guard rails—then I opened the rear door and grabbed a powerful flashlight from the back seat. I heard the squeak of the emergency brake as my mother set it, then she was out of the car and standing beside me as I shone our beacon toward the speck of light which she too could now see.

“Two lights!” I cheered, spotting a second speck. “They see us.”

My mother was on her phone now, calling the Spanish lifeguards who kept their rescue boat in the harbor of the fishing village of Skala Sikamineas, a few kilometers

east of us . . . where the sky showed the first pearly glow of dawn. She told them—in English, the language we all used—where we were along the coastal road, and said that we would head back east about half a kilometer to where the road descended and a lane branched off down to the beach.

The wind atop the cliff was cold. When I had grabbed the flashlight, I had forgotten to put on my gloves. My mother was holding her phone with her bare hand. Neither of us were wearing our wool caps. I could only imagine how cold it must be out there on the open sea.

“All right,” said my mother, handing me her phone. “Hop in and call the other Drops while I get us down to the beach.”

We got back into the car—the engine was still running, the heat was blasting—and I phoned the Drop on night duty at the hotel while my mother released the brake and slowly drove backwards with a sharp turn, so that our headlights shone out over the sea. She blinked the lights several times, letting them know that we saw them, then she drove carefully forward with a sharp turn to the east. We could not drive fast; the road was too rutted, too close to the edge of the cliff, and in the darkness of night, we had to be especially careful. But she drove at a good steady pace, her eyes staring ahead. While I gave the night-duty Drop our location, and told him that we were now heading down to the beach, I marveled at my mother’s courage.

By the time we were rocking from rut to rut down the lane—our headlights shone on the wreckage of previous rubber boats hauled up on shore—we could see the bright lights of those valiant Spaniards as they raced in their small rubber boat toward the cluster of faint specks, now about two hundred meters from shore. The Spaniards would tell the refugees to stay calm—“remain seated, remain seated” in Arabic—and then they would tow the refugee boat toward the spot on the beach where we would be waiting.

Now behind us followed the headlights of somebody’s car coming down the lane; the lights bounced up and down as the car jounced over the ruts.

My mother drove to a broad spot where the lane ended, with the cliff to our left and the slope of the beach to our right, and huge boulders ahead of us. As we got out of the car and were reaching into the back for our hats and gloves and a scarf against the cold wind off the water, the lights of the car behind us shone for a moment on our yellow reflective vests. Then the lights went dark, and we stood on a black beach beside a black sea, beneath a dark sky with a few faint stars. My eyes were watering in the cold wind.

This was our first boat. My mother and I had been on night patrol for five nights, including Christmas Eve, without spotting a boat. Now, sometime during the week between Christmas and New Year's Eve, we had spotted our first boat. I was not excited. I was not afraid. But never, never, never before in my life had I felt so keenly alive.

Then I heard a voice from the car behind us, "Anna Katerina, you and your mother are the first to arrive. Did you spot them?"

"Yes," I called back. It was Nikos, one of the Greek lifeguards, a man whom I had gotten to know during the past few days.

"Good work," he called. "Good work." I could see, just barely in the darkness, that he was taking off his jacket, and shirt, down to his skin, then his trousers, down to his shorts. And now he was putting on his black rubber wetsuit. He and the other Greeks would wade out to meet the refugee boat. They would help the refugees, one by one, to shore, where the rest of us would be waiting to help.

We could hear voices now from the two small rubber boats approaching the beach, the Spanish rescue boat bright orange, the refugee boat black. The dinghies bobbed in the waves that grew steeper near shore. I could distinguish between voices speaking Arabic with instructions to stay calm, and voices shouting, wailing, weeping and praying in Arabic because the terrifying voyage was almost over. Some of the refugees, men, were standing up now in their boat, ready to jump overboard onto the beach.

Nikos was shouting now in Arabic, his voice firm, almost angry. The standing men sat back down. I knew the drill from our instructions at the hotel: first the children would be lifted from the boat. Then the women would be helped from the boat to the beach. And then the men would be helped to shore.

My mother and I walked carefully down the slope of the beach—it was not a sandy beach, but a beach of round stones the size of lemons—until we stood above the wash of the waves. My mother carried her first-aid case. I carried a blanket. We could see now that the refugee boat was not only filled with people—25 or 30 in one small rubber boat—but it was filled with water as well. Waves had clearly washed over the low, rounded sides of the boat. Maybe the refugees had a bucket for bailing, though I did not see one.

Some of the people, either unconscious or dead, were held in the arms of others. I looked at my mother. She said to me quietly, "Be strong, Anna. Be strong."

Now the Spaniards in their trim, well-equipped rubber rescue boat nudged the wallowing refugee boat bow-first toward the beach, so that it would not turn broadside to the waves and capsize. Two Greeks took hold of the sides of the bow and braced it as they let a wave carry the bow onto the beach. Another wave carried the boat a bit further up the beach . . . and then the boat, its bow on land, most of it still in the water, was stable enough that Nikos could reach over the side, pick up a child and wade with him to shore. The little boy, wailing with fright, was able to stand as he stared back toward the boat for his mother or father. My mother set down her first aid case, picked up the wet child and carried him toward our car, where we had dry clothes and blankets stored in the back.

The headlights of three cars came bobbing down the lane. The Drops were arriving. Each car, I knew, was packed with towels, warm clothing and wool blankets. And the metallic blankets that held in body heat. Bottles of water. Chocolate energy bars. Enough to keep these people alive until we got them to the refugee camp near Skala Sikamineas, where fires would be burning in barrels, and hot soup would be served, and warm beds would be ready.

“Anna!” Nikos was calling my name. “Come take this one.”

I set down the blanket and walked in my Norwegian winter boots to where Nikos came wading out of the water with a small, limp body in his arms. “She is alive,” he said to me as he passed a child gently into my arms. “Hold her so that you can brace her head.” I looked down in the first faint glow of dawn at a little girl’s face—she was perhaps four years old—her eyes shut, her mouth open, utterly drenched by the cold sea.

Nikos said quickly, “Her mother is in the boat.” He glanced at the dark figures running across the beach from the cars. “Magnus! I need your strong arms!”

Magnus, one of our Drops—a dairy farmer from the west coast near Stavanger—ran past me in his yellow vest as I carried the limp girl up the beach toward our car.

Another Drop, Anne Kari, was dressing the little boy—his wet clothing lay in a heap on the ground beside him—with a wool, hand-knit Norwegian sweater, red with blue snowflakes. He wore woolen trousers, such as a child might wear when playing on a kindergarten playground in the winter, and heavy woolen socks. My mother was opening a box in the back of the car, from which she took a child’s woolen ski cap.

Bless those women back home, I thought, who knit sweater after sweater and sent them down to Lesbos.

“Mom,” I called, “spread a blanket on the ground. This little girl is unconscious.”

My mother handed Anne Kari the blue knit cap, then she stepped toward me and examined the child in my arms. She felt for a pulse under the jaw, then opened the lids of an eye. She laid her hand over the child's brow. "Hypothermia. She is deeply cold." I saw the concern in my mother's eyes, the same concern with which she must have examined a thousand premature babies . . . a concern which I had never before witnessed.

She took a blanket from the back of the car, then opened it to form a mattress big enough for a child and spread it on the ground. I gently laid the child on the blanket, while my mother supported her head. "Quick, Anna, fetch my first aid case, down on the beach. I need my stethoscope."

As my mother knelt over the child and began to unbutton her wet coat, I glanced at Anne Kari, who was putting the little boy on the passenger seat of the car—in the warmth of the blasting heater—then I ran down the beach and grabbed my mother's first aid case, almost hidden among the refugees now pouring out of their boat. I returned with the case to my mother, who lifted the lid, took out the stethoscope, fitted it to her ears and then leaned over the child while she pressed the silver disk on several spots of wet pale skin over the girl's heart. "You're a fighter, Sweetheart," she said to the unconscious child. "Keep fighting. Keep fighting."

Anne Kari now joined us, holding a blanket to block the wind off the sea as my mother undressed the child. I handed my mother a towel. She dried the child's dark hair, then her face and the front of her body. Rolling her over gently, my mother dried the girl's back, the backs of her legs, her feet.

"She is so cold that her heart, her brain, everything is very delicate now."

Rolling her over again, my mother dressed the girl with layers of woolen clothing that I fetched from the car. A traditional Norwegian sweater, red and white, with brown reindeer running across the chest. A white cap with a tassel. Blue-and-white mittens. Wool socks, and then another pair of wool socks. Still the eyes were closed, the mouth was open, but we could see now that the girl was breathing with more than imperceptible shallow breaths.

Magnus came walking toward us with a woman in his arms, a woman who also wore a Norwegian sweater and a cap and woolen trousers and wool socks, a woman who stared at the little girl on the blanket . . . who was safe and warm. "Lamar," she said, calling, as we guessed, the girl's name. Then she spoke in Arabic as Magnus, kneeling, set her on the ground beside her daughter. Apparently too weak to walk, or even to sit

upright, she lay down beside her daughter, wrapped her arm over her child and snuggled with her, their cheeks touching.

Anne Kari wrapped a blanket over them, tucking it beneath the mother's feet against the wind. My mother rolled up a towel and set it beneath their heads as a pillow.

Then the four of us, my mother and I, Anne Kari and Magnus, stood for a moment in a quiet circle, looking down at two survivors who had managed, somehow, to flee from a war, to reach the coast of Turkey, to cross the sea on a winter's night, and to find safety on a stony beach. Where was the husband, the father? Did these two refugees know that all the borders further north into Europe were closed? Did they know that even further north, all across Europe, holiday shoppers were buying champagne and fireworks in preparation for New Year's Eve?

That was the moment when I felt, for the first time in my life, the grief—the huge, black, overwhelming grief—for people who were strangers, to whom I could not even say “Hello”, who were the victims of war. That was the moment when I understood, for the first time, that the word “humanity” meant “all of us”.

“Magnus,” said my mother, “will you help the mother into the car? The heater is on. We can place her daughter in her lap. Then Anna and I will take them to the camp. They can sit in a chair beside the fire burning in a barrel. The child needs real heat. And hot soup. And a bed.”

Anne Kari spoke with the boy on the passenger seat. He was still shivering but clearly warmer. He kept asking for someone. He had family on the beach and he wanted to find them. Anne Kari held his hand as they walked toward the noisy crowd of refugees and Greeks and Drops; the boy kept calling out someone's name.

Kneeling again, Magnus lifted the mother and set her carefully on the passenger seat. Then he set the daughter on her mother's lap. The mother wrapped her arms around her child and sent up a wailing prayer.

Magnus looked at us briefly. “The bus should be here soon. We'll meet you at the camp.” Then, grabbing armloads of blankets and woolens from the rear of our car, he hurried back down to the beach and disappeared into the crowd.

The Spaniards were pulling away now in their orange rescue boat; they would return to Skala Sikamineas, where they would be on call, ready for the next overloaded rubber boat filled with desperate refugees.

I made room for myself on the back seat. My mother drove the car in tight little turns, forward and back, until she managed to turn around and head up the rutted lane in low gear.

To the southeast, somewhere beyond the brown hills ahead of us, the winter sun was rising above the sea, bringing a new day to the inhabitants of planet Earth.

Chapter Two

My mother drove along the coastal road to the Lighthouse Refugee Relief Camp, built on a flat stretch of land between the brown hills and the blue-gray sea. This sanctuary was the most intelligent, the most compassionate little spot of human habitation that I had yet found in my young life. It was an informal camp, not a United Nations refugee camp with big tents on concrete platforms, but a collection of medium-sized tents of different colors, clustered in an orchard of olive trees. The camp had been built in 2015 by international volunteers who came and stayed for two weeks to a month—as nurses, as teachers, as cooks, as whatever was needed—before they departed and were replaced by other good-hearted people from around the world.

My mother parked our little blue car near the gate, then turned off the engine; the heater blasting warm air became silent. She looked at the mother in the seat beside her—we did not know her name—then she held out her hands as if to the heat of a fire; she mimicked eating soup with a spoon from a bowl; she laid her head on her hands as if sleeping. The woman—we did not know what country she was from—nodded and said something, clearly grateful.

I opened the back door and got out, then opened the passenger door and looked with delight—it was no doubt the greatest burst of happiness that I had ever felt in my life—at the face of the little girl who stared at me with open eyes. No smile, no expression, but she was sitting up, her head was no longer slumped against her mother’s shoulder, and she was looking—*looking*—at the world where she now found herself.

I smiled at the mother and could only gesture with my hands toward her child while I cheered, “Wonderful!”

The mother smiled at me, and to this day, when I am now a mother with my own daughter, I can still remember her smile and her dark eyes that told me, “Thank you for keeping my child alive.”

My mother stood beside me now. “Anna, carry the child. She will still be very unsteady. If her mother can walk, I will walk beside her.”

I held out my arms. The mother said something to her daughter, who let me lift her out of the car into the morning sunshine.

Now the mother managed to swing her feet out and, a little shaky, stand with one hand on the roof of the car. My mother held her arm, bracing her.

We walked toward the gate to the camp, a homemade arch made of various pieces of wood. Across the top were boards painted white, with the word “Welcome” painted in black in four languages: English, Arabic, Farsi, and Urdu. How nice, I thought. How nice.

To the right of the arch was a picture of a light house: the tall tower that kept people safe. To the left were various sheets of information, also in four languages.

Ahead of us, a path sprinkled with white gravel led into the olive orchard. Someone walked past a red tent, glanced at us, then kept walking. Above the path were light bulbs strung between the trees; they were off now, but at night, the camp would be well lit.

The little girl in my arms pointed up at the word “Welcome” in her own language. She spoke the word to her mother, who repeated the word, as if she could hardly believe it. For how many weeks, how many months, had they been walking on highways, riding in dusty trucks, huddled in a cold wet boat . . . until finally, someone did not ask for more money, but told them, “Welcome”?

As we walked beneath the arch, a woman with a clipboard appeared at the far end of the path. Someone had clearly alerted her that we had arrived. She hurried toward us, greeted the mother and her daughter with cheerful words in Arabic, then she spoke with my mother. She wrote down the details: How many refugees had been in the boat? How many children? Women? Men? Any fatalities?

My mother shook her head. “None that we know of.”

“Super. We’ve got a good fire going. Pull up a chair and make yourselves at home. We’ll have hot soup and bread ready in ten minutes.”

And then the woman hurried back up the trail with her clipboard, calling ahead to alert the cooks that thirty “guests” were soon arriving. Her name was Birgit, she was from Dresden in what had once been East Germany, and she was a wizard at running the camp.

As we made our way along the path into the camp, we passed two signs, one pointing to the left, one to the right. “Women” in four languages, with a picture of a woman and a child: to the left. “Men” in four languages, with a picture of a man: to the right. The toilets, as I knew from previous visits, were neat and well equipped.

We passed an olive tree with red paper hearts strung on a brown cord wrapped around the ancient gray trunk. Each heart, bright red in the sunshine, had the word “love” written on it in one of many languages. The little girl in my arms found the word in her own language. She said it to her mother, who said it back, twice.

We came to an open area beneath a tarp roof, where brightly colored chairs were gathered around an upright, rusted barrel that served as a stove. A black stovepipe reached up through the roof. Large round stones wrapped around the bottom of the stove on the gravel floor. A fire burned inside. The child chirped with happiness as if someone had just handed her a piece of chocolate cake.

My mother arranged four chairs around the open front of the stove, close enough that the mother, when she sat down, could put her feet on a warm stone. I set the child down in a chair beside her mother. Life was coming back into the child’s face. The deep cold of hypothermia had been slowly replaced by the growing warmth of the Norwegian wool, by the heater in the car, by the bright morning sunshine, and now, by the promise of warmth and safety in a place which finally—after who knew what horrors in a child’s life—made sense.

My mother sat down and said, gesturing with her hand toward herself, “Sofia.”

The mother said, speaking carefully, “Sofia.” Then she gestured to herself and said, “Loreen.”

My mother said, speaking carefully, “Loreen.”

Loreen nodded, then she introduced her daughter, “Lamar.”

My mother said, “Hello, Lamar.”

Lamar said with a faint smile, “Allo, Sofia. Shukran.” Thank you.

Now my mother introduced me, “Anna”, who wished with all her heart that she could speak Arabic and truly get to know these two new friends.

Half an hour later, the others began to arrive. Our quiet sanctuary became a bustling reception hall where people sat around the three barrel stoves, sought a toilet, or sat at a table where bowls of steaming soup and cups of hot tea were now being distributed. One man stared up into the gray-green branches of an olive tree, perhaps remembering his own trees back home.

My mother, no longer needed by her hypothermia patient, asked me to stay with Lamar and Loreen, then she went out to the car to fetch her first aid case, and returned to her duties as a nurse.

The three of us stood up from our chairs, giving our places to people who were shivering and blue. We walked—Lamar was able to walk now, though slowly—to a table where we sat and inhaled the steam from large bowls of thick potato soup. I had picked up my spoon and was stirring the soup when I heard Lamar say, “Bon appétit!” I looked at her, seated across the table beside her mother, her eyes bright with the joy of this moment.

“Bon appétit,” I said back, feeling myself to be in the presence of people whom I already, in a quiet but powerful way, was beginning to love.

Magnus joined us. He held up a plastic travel bag in each hand. Loreen and Lamar immediately recognized the luggage which they had brought on the boat. Hypothermia dulls the mind: they had completely forgotten about their bags.

Magnus set the bags on the ground, then sat on the bench beside me, wrapped one arm around my shoulders and gave me a burly hug. Loreen and Lamar opened their bags: everything inside was soaked with sea water. Loreen lifted out a cell phone and tried to turn it on: it was dead.

I made a sudden decision, a decision which, two weeks ago, I never would have made: to give my phone to a stranger with whom I was barely acquainted. I knew—all the volunteers who worked with refugees knew—that the cell phones were vital to the refugees. They called home . . . whatever was left of home in some war zone. They called to family in Europe. They called to people who knew a safe route further north. The phone was as precious to them as what little money they still had.

I looked around, spotted a dark-skinned person serving a basket of bread and asked him if he could translate from English to Arabic. He responded in English, “What would you like to say?”

I pointed at Loreen as she set her dead phone beside her bowl of soup. “Please tell her that I will give her my telephone. It is out in the car.”

He delivered my message in Arabic. Loreen looked at me with surprise, and gratitude.

I continued, “When we are done with our soup, I will go out to get my phone. She can call home, if she wants. She can let them know that she and Lamar are safe on Lesbos.”

Again the young man translated. Loreen’s smile and vehement “Shukran, Anna” confirmed that I had been right: she wanted to let someone know that she and Lamar were safe.

Already I was thinking ahead. Loreen could use the phone now in the camp. Then my mother and I would take the phone with us to a shop in Molyvos, the town near our hotel, where we would buy a Greek sim card to replace the Norwegian card. And . . . we would set up an account when we returned home so that I could pay into it online from Norway. That way they would have a phone which would always work.

I would have to delete all my junk. Yes, it was like flushing away the old life. Good bye to all that high school nonsense.

My mother and I would make sure that my phone—Loreen’s phone—could easily call my mother’s phone. That way, if they needed us, just push a single icon and my mother would answer. Even at three in the morning. Family is family.

After we had finished our soup and warm bread and hot tea, and a salad with greens and tomatoes so fresh that they must have been growing in someone’s garden until yesterday afternoon, I went out to the car and fetched my phone. Even before I walked back through the arch into the camp, I spent about five minutes deleting, deleting, deleting stuff that belonged to some childish little girl. Did I have even one single friend in that school? Or was it all just empty grins in the endless Selfies?

Back at the table, I sat beside Loreen and showed her how to use the phone. She understood immediately. “Aleppo,” she said, already tapping in the country code and number.

I never in my life saw anyone so grateful to reach her connection. After the first flurry of Arabic, Loreen and Lamar stood up from the bench and walked to the relative quiet twenty meters away at the back edge of the camp. Beyond them was a little playground with a slide for small children, and the rocky slope of a hill. Loreen handed the phone to Lamar, who spoke to . . . perhaps her grandmother, too old to leave the war zone?

When they returned to the table, Loreen looked at me with deep gratitude, and peace, in her eyes. “Shukran, shukran”, she said as she handed me the phone. I tried to explain that I would come back to the Lighthouse Camp tomorrow with the phone for her. Then she could keep it.

She held her hands over her heart and bowed to me.

After our meal, Birgit took us to a tent where Loreen and Lamar could sleep on two of the twenty beds, with sheets, wool blankets, and a pillow. There was a box beneath each bed for their belongings. They could hang their wet clothing on one of

several lines overhead. (My mother and I had brought, in plastic bags, the wet clothes they had been wearing.)

Two electric heaters, one at each end of the tent, kept the tent fairly warm. The men slept in their own tent at the other end of the camp.

My mother joined us long enough to give our new friends a hug. With the help of another refugee who could speak some English, my mother and I reassured Loreen and Lamar that we would return to Lighthouse tomorrow, with the telephone and a Greek sim card.

They told us, “Shukran, shukran.” They understood. They trusted us.

And then—my mother’s duties were done, another nurse had arrived on her shift—we walked out the path to our little blue car, where we found Magnus leaning against his little yellow car, looking—as we all felt—utterly exhausted.

“Good work, Drops,” he said.

“Good work, Drop,” I said back.

“Sofia, did you manage to eat anything?”

“I never had a moment to even think about a bowl of soup.”

Magnus gestured with his thumb up the road. “What do you say we visit our favorite café in Skala Sikamineas and get you an omelet? And three cups of the best coffee in the world.”

My mother laughed with gratitude. “Thank you, Magnus. You are ever the gentleman.”

Chapter Three

So we drove to the little town with its picturesque harbor filled with small, brightly painted fishing boats. It was about ten in the morning now and people were sitting outside at the tables in the warm sun, reading a newspaper or watching the fishermen getting their boats ready to go out for a day of fishing. The sky arching over our perfect little world was a beautiful deep blue.

I noted a dozen pieces of octopus—each piece was two tentacles which had been neatly cut from the body—hanging from a line to dry. I kidded with my mother, “Perhaps you would like an octopus omelet?”

We walked to the Cavos Café, a stone building with a sign outside advertising “Coffees, pancakes, breakfast, ice cream” in English. Erato stepped out the door with a tray.

“Kaliméra, Erato,” I called to the woman my mother’s age.

She looked at me, shot me a smile and called, “Kaliméra, Anna,” remembering my name. I felt so happy to be a part of this international world on a bright and sunny morning.

We stepped inside and said good morning to Giorgos, who waved from behind the counter where he was operating a noisy coffee machine. Magnus spoke with Giorgos while my mother and I walked to the back of the café and admired the big red-headed parrot, who gave us a squawk as if he was still waiting, a bit groggy, for his first cup of coffee.

Back out into the sunshine, we sat at a round table with a view of the small white boats with blue trim. Erato took our order, then I studied the Greek names on the bows of the boats. After a few days practice, I was now able to read, in Greek, the names of various goddesses: Athena, and Persephone, and Aphrodite.

The cats began to gather around our table. Never before had I seen so many cats as in this fishing village. When Erato brought out my mother’s omelet—with goat cheese and bright red tomatoes—and our three cups of coffee, she also brought a spray bottle filled with water, so that we could spray the cats while they prowled and yowled beneath our table, to chase them away.

The coffee was exquisite. Usually, back home in Norway, I drank coffee only when we were out skiing. Then I had a thermos in my backpack, along with oranges and chocolate. But on that sunny morning in Greece . . . I began to think of moving south.

A question which had been troubling me during the past few days . . . had jumped to the front of my mind at the Lighthouse Relief Camp when I had looked at

the novel sight of the thirty cold and exhausted refugees crowded around the three barrel stoves. The question was, Why were there so many refugees arriving in their little boats? Yes, I knew they were fleeing from the wars in their home countries. In school, we had talked about the war in Syria. But . . . it was as if two completely different worlds were right next door to each other. In one, bombs were exploding. In the other, people were drinking their morning coffee in the sunshine.

My mother had finished her omelet and now sat with her face lifted to the sun, her eyes closed, enjoying the lovely peace.

Magnus, with the spray bottle in one hand, was looking across the harbor at a small white church with a red roof which blessed the fishermen on their way out to sea.

I disturbed their peace by asking, “Magnus, maybe this is an obvious question, and maybe I ought to already understand, but . . . Why are there so many refugees?”

He looked at me with his gentle blue eyes. “Because there are so many wars.”
“But . . . Why are there so many wars?”

I could see a sadness in his eyes, and a hint of anger. “Because there are so many weapons.”

My mother was looking at us now, first at me, then at Magnus.

“Ever since World War Two,” he said, “the Americans and the Russians have poured weapons into the Middle East, in part to influence the various governments, in part to pay for oil. In 1953, the CIA overthrew the democratically elected government of Iran, installed the Shah, then traded weapons for oil. Both America and Russia tried to buy Egypt’s loyalty by offering more and more weapons. Look at the situation today between America and Saudi Arabia: America trades weapons for oil, and then Saudi Arabia uses those weapons in its war against the tiny country of Yemen. Saudi Arabian pilots, trained by American pilots, drop American bombs from American jets, guided by American satellites, onto neighborhoods and hospitals in Yemen.”

He paused, then he summarized with disgust, “Oil and weapons. The Boys do not care how many are killed, as long as they are paid for their oil and weapons.”

“And Syria?” I asked, for I knew almost nothing about Yemen, but I did know at least a little bit about Syria from our discussion one day in school.

Magnus looked around, then waved to Erato, just returning from another table with her tray. “Erato, please, three more coffees. And three glasses of your great lemonade. Efcharistó polý.”

Then he looked at me, as if wondering how much to say. I was, of course, just a teenager.

“Anna, Syria is a training ground for the next war. Right now, on this very day, Russian pilots are flying Russian jets over Syria, and American pilots are flying American jets over Syria, and sometimes the Russian jets are right behind the American jets—‘on their tail’, as they say—in the combat position which would enable

them to shoot down their enemy. They do not shoot, of course. The Russian and American pilots are busy targeting the Islamic State and various rebels and insurgents and mercenaries and nineteen-year-old farm boys—poorly educated kids who have grown up milking goats—who are now soldiers drafted into somebody’s holy army. Israel sends in a missile now and then. Turkey fires artillery at the Kurds. Everybody is testing their weapons, training their pilots and flight crews, training their infantry, training their officers, training their radio operators and truck drivers and medical teams . . . in preparation for the *next* war.” He shook his head, this Norwegian dairy farmer who knew so much about the world. “They do not really give a damn about Syria.”

“They don’t care about people like . . . Loreen and Lamar?”

“Anna, they have already demonstrated, for *years*, that not only can they drop their bombs on a hospital, but on the *maternity ward* of a hospital, and then fly back to the base for a hot shower and a hamburger.”

My mother stiffened in her chair. She was listening, very carefully.

“Something more,” said Magnus. “Something more than oil and weapons, the evil twins. Something more than training to fly helicopters and jets.” He paused. “The Boys are showing off how powerful they are. The bullies are swaggering.”

Erato arrived with our three coffees, and three lemonades, and three breakfast rolls which were, as she told us, “On the house.”

“Efcharistó polý,” said Magnus with his warm voice and gentle eyes.

We all three took a drink of our coffee as we watched—taking a pause in the discussion of war and refugees—a fishing boat coming into the harbor with a flock of white gulls wheeling overhead in the blue sky.

“Anna,” said Magnus, tired but determined, “when George Dubyah Bush and the Boys invaded Iraq in March of 2003, they did something that Lyndon Johnson and the Boys had done back in the spring of 1965. On both occasions, America attacked a small country which had done nothing—absolutely *nothing*—to America. Not a single person from Vietnam had harmed, or even threatened to harm, on Vietnamese soil or on American soil, a single person from America. The Vietnamese had not so much as fired a pea shooter at any American target. And yet . . . Johnson ordered, after years of a limited American military presence in Vietnam, a sudden and massive escalation: Operation Rolling Thunder. Huge B-52 bombers were flown across the Pacific to airbases near Vietnam, so that they could drop their bombs—in many cases chemical bombs—on people who lived in thatch villages and plowed their rice paddies with water buffalo.”

He paused, then he asked me, “And do you know why?”

I could only shake my head. The war in Vietnam was ancient history to me.

“They didn’t give a damn about Vietnam. Their purpose was to show China and Russia, Vietnam’s neighbors, that *America* was the boss in Asia. America would

dominate the markets. America would harvest the resources. America would control the shipping routes. America could not drop its bombs on the Soviet Union, because that would be the start of World War Three and the launching of nuclear missiles. America could not drop its bombs on China, because no one was ever going to win a war against a billion fanatics. So America bombed the hell out of Vietnam—America dropped more bombs on Vietnam over the next ten years than had been dropped in all of World War Two—just to show to anyone in doubt that America was Number One Superpower.”

The fishing boat pulled broadside to the wharf near our table, then its engine became silent. The lone fisherman tied his stern line to a piling. The cats began to gather.

“And then, following tradition, Dubyah and the Boys, in March of 2003, invaded another small country far from American shores, a country which had not so much as tossed a pebble at any American citizen. Those terrorists in the jets which flew into the World Trade Center and the Pentagon were mostly from Saudi Arabia. They were *not* from Iraq. Never mind. In Operation Shock and Awe—the Americans are great for coming up with catchy names—during the opening days of the invasion, Bush and the Boys launched roughly 320 cruise missiles at targets in and around Baghdad.”

The fisherman walked to the front of his boat and tied the bow line to a piling. Twenty cats—at least—sat along the edge of the wharf, peering into the boat for fish.

The three of us were watching the fisherman and the cats while we listened to Magnus as he spoke with increasing anger in his voice. Maybe we needed something nice to look at, something *positive*, something *reassuring*, while we listened to this tale of madness.

“Anna, do you know what a cruise missile is?”

I glanced at Magnus and shook my head.

“It is a very large missile which carries a very large warhead—either what they still call ‘conventional’, or nuclear—and it is capable of destroying a very large target. Like an airport. Or an entire factory. Or an electrical power plant. Or a military base.”

Several cats jumped from the wharf into the boat. The fisherman paid no attention as he put away various pieces of equipment in the stern. The cats moved toward the heap of nylon net in the bow.

“Cruise missiles travel from their launch site to their target in a very special way. They do not arch through the sky, but fly at a very low altitude, below radar, following a terrain map in their onboard computer—up over hills, down into valleys, around mountains, over lakes—until they reach, with pinpoint precision, their targets. Suddenly, out of nowhere, a giant bomb explodes in downtown Baghdad, knocking out an electrical power plant . . . and shattering, with its shock wave, thousands of

windows in all the surrounding buildings. Apartment buildings, hospitals, schools: suddenly their rooms are full of flying, shattered shards of glass.”

More cats were hopping aboard the boat. The cats which had been pestering us beneath our table now joined the others.

“Those cruise missiles had been launched from ten different American ships in the Persian Gulf and the Red Sea. Yes, they were launched from four guided missile cruisers, four destroyers, and two submarines. In addition, two aircraft carriers were sending Hornet and Tomcat fighter jets loaded with bombs—bombs fitted with state-of-the-art guidance systems—to various targets in Baghdad.”

The fisherman came out of his wheelhouse, walked to the bow and began to unfold the heap of his yellow net. He tossed the larger fish into an open crate. He tossed the smaller fish, or fish of a sort which he did not want to keep, among the cats swarming around his feet. The cats yowled twice as loudly as they had yowled beneath our table.

“Do you understand, Anna, that the firing of over three hundred cruise missiles, from a fleet of ten ships in two neighboring seas, was a show. A magnificent, horrible show. Yes, in part it was a military maneuver which alerted Saddam Hussein that his days were numbered. But five cruise missiles could have done the job. Even one, with the promise of more to come.”

Cats were now hopping from the boat back onto the wharf, each with a small silver fish in its jaws.

“Keep in mind that America was bombing a civilian city whose inhabitants had not harmed, or even threatened to harm, America in any way. The fabled Iraqi nuclear weapons program was bogus. But the oil was very real. Not a single one of those 320 cruise missiles landed on the oil ministry. Oh, this is a dark and dirty story.”

The cats spread themselves among the tables of the café, with adequate space between them as they gnawed off the fish heads and removed the meat from the bones.

“The main purpose of Operation Shock and Awe was to display, primarily for the audience in Moscow, a massive show of sophisticated military force. It was a *show*, for the Russians, for the Chinese, for the Iranians, and for the voters back home in America. Letting everybody know that America was top dog.”

Magnus drank his coffee. I wondered why we had never invited him to speak at our safe and boring little high school.

“Of course, not so long after, on May 1, 2003, the world was treated to pictures on global television of President Bush landing in a fighter jet on the deck of the aircraft carrier *Abraham Lincoln* off the coast of San Diego. Bush emerged from the jet in a flight suit. He had been a passenger, not the pilot, but he was dressed in a cocky military jacket . . . for show. He posed for pictures with the flight crew. He later gave a speech to America, and to the world, with words that few of us remember,

but with a long banner behind him which all of us remember, for it read, on television screens around the world, ‘MISSION ACCOMPLISHED’. Yes, this was a show. A pompous and belligerent show.”

Magnus stared out at the sea, his face filled with both anguish and outrage. “The war that Bush and the Boys started back in the spring of 2003 rages on today, almost fifteen years later, in Iraq, in Afghanistan, in Syria, and in a half-dozen other countries where the proxy wars go on and on. The refugees pour out, terrified, desperate, their homes suddenly in the middle of a war zone. A woman and her daughter somehow make their way—without a husband, without a father—to the coast of Turkey, where thieves take her money and put them in a small rubber boat that will *perhaps* take them across a cold dark sea at night, in winter . . . to a beach where a few good-hearted folks will carry them in their arms to safety. A nurse will listen with her stethoscope to a girl’s faintly beating heart to know whether or not the girl is still alive. Drops will give them warm clothing. Angels at the Lighthouse will give them a bowl of hot soup and a warm bed.”

Magnus paused, then he cupped his hands and shouted north across the sea, “And then *Europe* will tell them that the borders are closed, you have to go live in Moria Camp on the southern tip of Lesbos, which is half prison and half muddy slum. Until we figure out what to do with you.”

Now he looked at me, and I saw the tears of rage in his eyes. “That, Anna, is why there are so many refugees.”

My mother touched his arm and said quietly, “Thank you, Magnus.”

He slumped back in his chair. “You are welcome. You are both welcome. Now please tell me why Norwegians voted last September to re-elect a government which plans to drill for oil in the Arctic. Don’t you see, it will be the Persian Gulf, this time on top of the planet. American oil ships, Russian oil ships, American military ships, Russian military ships, submarines prowling out of sight, aircraft carriers parading like cocky roosters along the boundaries of our ‘international zones’, and no one knows—*no one knows*—how many of those ships and planes and submarines are carrying nuclear weapons.”

I heard my mother say—for the first time in my life I heard my mother say—“Shit.”

Magnus turned to me with the look of a father achingly afraid for his child. “Anna, we have failed you. We have failed you and your generation. Because it seems that our only policy is . . . to have no policy at all. Our policy is to make the same old mistakes, again and again, and then to dump the entire unprecedented catastrophe into your laps. Here you go, kids. Here’s a massive oil spill, at forty degrees below zero in the middle of the Arctic night, when a polar storm rips apart what is left of the ice cap and sends giant sheets of ice toward the oil platforms,

cutting them down as if knives were cutting through little wooden matches.” He shook his head, horrified at the vision. “Nobody’s going to shut down those dozens of damaged wells gushing oil. It’ll be the biggest oil slick in our long and filthy history.”

He turned to my mother. “And the oil tankers, adrift in that storm? The aircraft carriers that crash on the rocky coast of Russia with their nukes on board? Sofia, drilling for oil in the Arctic will be our final suicidal madness.”

I could see in her face that she was just as afraid as he was. That she *had* been afraid for a long time. Without telling me.

Now Magnus looked at me again, his eyes studying me. “Anna, when the women of the world rise up and roar, this poor old battered world will finally move in a new direction. This poor old world will finally begin to heal. Because women, you women, have never believed in any of this shit. You never had to parade around in a flight suit to show us what a Stud you are. You never ordered giant planes to bomb the peasants in Vietnam for *ten years*. You never ordered gas chambers in Auschwitz, or the siege of Leningrad. You never created mustard gas in a laboratory, and then ordered young soldiers to toss canisters back and forth between their trenches.”

Magnus stared at me, searching, hoping. “Anna, I believe in you. I believe in the wisdom and the instincts of women. When a million women march in every country around the world, we will have peace. When they demand an end to the oil, when they demand an end to the weapons, we will have *peace*. When they vote for each other and gain their rightful majority in government, we will have peace.”

He paused, until he said with quiet determination, “And then . . . people can finally become what we were born to become, what we were destined to become. Something far better than what we are today.”

My mother raised her glass of lemonade. “I’ll toast to that.”

And so we did, the three of us clinking our glasses together, and then drinking the cold water flavored with strong, fresh lemons.

We thanked Erato and Giorgos. Magnus, ever the gentleman, paid the bill. We said good-bye to the cats, who paid no attention. And then we got into our little blue car and little yellow car and drove back along the coastal road—past the Lighthouse Relief Camp where Lamar and Loreen were sleeping—to the hotel where we mumbled sleepy hellos to the Drops in the lobby, then climbed the stairs to our rooms and took off our yellow vests and winter clothes, and crawled into bed and slept.

Chapter Four

“Sweetheart. Sweetheart.” I could hear my mother’s voice, singing to me, “Sweeeeeeeetheart!”

I opened my eyes and glanced from my bed toward the hotel room windows; dusk, almost dark. I had slept from noon to . . . “What time is it?”

“Eight o’clock. The hotel dining room is closed. What do you say we go out for a nice dinner in Molyvos? We’ve got four hours until we head out on patrol at midnight.”

“Oh,” I groaned. “I hope it’s a quiet night.”

“Me too. Maybe they declared world peace.”

“Mmmmmm.” I closed my eyes, drifting back into sleep.

“Anna, I want to show you something that you might find interesting.”

“Huh?” I lifted my head from the pillow so that I could see her, seated at our one small desk, looking at the screen of her laptop. “What is it?”

“Something for you to think about. Please, come take a look.” She patted the seat of an empty chair, already in place beside her and waiting for me.

I stared at her for a moment, remembering when she had knelt on the beach beside the cold, unconscious body of a little girl. My mother had unbuttoned the sodden jacket and the shirt, tugged up a wet undershirt, then she placed her stethoscope on the wet pale skin over the girl’s heart. I had waited . . . waited . . . and then I heard my mother say, “You’re a fighter, Sweetheart. Keep fighting. Keep fighting.”

I tossed off the blanket, sat up on the edge of the bed, glanced down at my rumpled pink nightgown, then shuffled over to my mother. I sat in the chair and peered at the screen. “What is it?”

She pointed at the title of a website as she read it to me, “Norwegian Center for Human Rights. It’s a branch of the Law School at the University of Oslo.”

I looked at a picture of a woman standing at the front of a classroom, giving a lecture. And now, as my mother clicked, I saw a picture of a group of students, clearly from a broad range of countries, each one holding a rose as they celebrated some special event. I looked at a picture of a sign in some foreign country that said, “Ballots not bullets.” And at a picture of soldiers in camouflage, one of them tying up a prisoner on the ground while another pointed a rifle at the man’s head.

My mother scrolled down to the text, which she had clearly already read. “Following high school graduation, the law program at the University takes five years, two of them at the International Center for Human Rights. The work entails a

combination of both courses and research. Here, look.” She pointed, “Human Rights and Conflict. You would work with a research group, investigating the human rights of people like Loreen and Lamar.”

I leaned toward the screen, reading carefully. “I could work with a research group?”

“Isn’t that what you always complain about at your ‘dull, dreary, horrible, boring high school’? You’re sick of the courses and the exams. You want to *do* something.”

“Mom, I’ve got another year and a half of high school. Can I start at the law school in January?”

“Anna, first you’ve got to be accepted. I am sure that the entrance requirements are very high. Whereas your grades . . . Well, let’s say that you have a year and a half to prove yourself.”

She was right. My grades stunk. But high school was so totally, totally *boring*.

“Look here,” said my mother, clicking on Studies. She typed in a course number, 5570. I read, International Criminal Law. She scrolled down to Course Content, then pointed with her finger, “International Criminal Law is undergoing a dramatic development these days. This course seeks to present the most current state of this field and its place in the modern international legal system.”

She moved her finger down. “This course will discuss . . . the notion of international crimes.” A bit further, “War crimes, genocide, crimes against humanity and crimes against peace will be discussed.”

She scrolled down a bit further. “The course will seek to discuss current themes such as (for example) . . . military interventions such as the one in Iraq.”

Now she looked at me, her eyes questioning. “Maybe the world is waiting for Anna Katerina to take George Dubyah Bush to court. And to kick his ass.”

Never in my life had I thought about being a lawyer. Those were dull gray guys with briefcases who made a lot of money and drove fancy cars.

But then again, I had never thought about being a *human rights* lawyer. Nikos, the Greek lifeguard, had lifted that little girl out of the rubber boat and put her into my arms. Maybe that was the start of something.

“What I think you might do,” said my mother, “is, when we get home in January, you go visit the Norwegian Center for Human Rights.” She clicked on Contact. We saw a picture of a yellow building with a blue trolley in front of it.

“They’re not at the main law campus, but about a ten minute walk away, as I can see

from the map. Here,” she pointed, “they’re at Cort Adellersgate 30, second and third floors. You would take the train to National Theater, then walk on Ruseløkkveien through Victoria Terrasse—the Concert Hall will be on your left—to Cort Adellers Street. Turn right and walk about a hundred meters. The yellow building is on your right. It says somewhere in the website that they have a restaurant, so you could have lunch there.”

Yes, I knew where the Concert House was. My parents had been taking me there since I was ten years old.

My mother studied me. “What do you think?”

“Will you come with me?”

She smiled. “Yes, I know it’s a bit overwhelming. But if you walk in alone, a nicely dressed high school girl who has already studied the website, and you ask for a tour of the Norwegian Center for Human Rights—be sure to ask to see the library—then you will really impress them. Talk with them about admission requirements. Don’t tell them about your grades. We’ve got a year and a half to transform you into an Olympic student. Ask them . . . yes, ask them if you might sit in on some classes. Ask them if you might do some research in the library. Anna, you’ll impress them.” She nodded, confident, even a little proud.

She continued, “Have lunch in the cafeteria. Treat yourself to a nice big lunch with a cup of coffee, and remember our cups of coffee at the Cavos Café in Skala Sikamineas on Lesbos Island. Then walk over to the main campus of the Law School. Take a peek into the classrooms. Visit the library. Then,” she laughed as she clapped her hands, “take the train home to old horrible, boring, dreary Ås and tell your mother about your day.”

I sat back in the chair. Could I really do all this?

My mother looked at her watch. “Eight-twenty-five. Anna, you take a shower, then I’ll take a shower, and then let’s go out to our favorite restaurant in Molyvos.”

“The Geia Mas,” I said, “with the wonderful family.” A family of four—mother and father and two handsome Greek sons—who always greeted us with big smiles. The garlic bread was the best in the world. The salads were so huge, they alone could be a full meal.

“Yes,” said my mother, clicking off the laptop. “We’ll dress up a bit. Let’s celebrate.”

And so it came to pass, that a seventeen-year-old girl became, with her mother's guidance, a seventeen-year-old young woman, who, for the first time in her life, had a *purpose*. A purpose that would guide me for the next sixty years. Because, you see, the old lady of seventy-eight is still shaking her fist at any malevolent bastard who even *thinks* that he's going to hurt my precious world.

I had no idea that I—after my successful application, and my entry into Law School in August of 2019—would not only witness but participate in two of the great events in all of human history—a peaceful uprising in 2020, which led to a second peaceful uprising in 2021—each one a long bold stride toward an entirely different future on planet Earth.

Yes, the law student became an architect, one of many architects around the world, of a powerful legal system, of an unprecedented economic system, of a magnificently successful energy system. And, as a result, we all became as well . . . architects of peace.

But I run ahead of myself. We have time, plenty of time, for that momentous story.

My mother and I got dressed, each in the one fancy dress that we had brought, ready for our Night on the Town. We drove into the ancient harbor town of Molyvos, with its castle lit by spotlights on the top of the hill. My mother navigated the narrow cobblestone streets, then we walked to the old stone building where the two handsome sons—Alesandro and Gregory—met us at the door. They led us upstairs, where their mother—“the Boss” as they kidded—and their father—“the best chef on the island”—treated us like honored guests.

My mother and I drank Greek wine, emptied a basket of garlic bread, swooned over the bright red tomatoes in our salads, marveled at the barbecued chicken, then treated ourselves to Greek pastries with unpronounceable names. We both finished with a cup of strong coffee to keep us going through the night.

Because, of course, after dinner, we would drive back to the hotel and change into our layers of Norwegian wool, and our mountain boots and down jackets, wool ski caps and scarves. We would load the back of our little blue car with blankets and winter clothing, with bottles of water, and my mother's first aid case.

Then at midnight, we would roll out of the hotel parking lot onto the road heading east along the northern coast of Lesvos, a rutted dirt road that jounced and wound along the edge of a cliff with no guard rails, no lights. A road that we shared

with occasional other cars from other volunteer organizations—Swiss, Dutch, French, German—with whom we would stop and speak from car window to car window about the news of the night.

Every ten minutes or so we would halt our little blue car, set the emergency brake, then get out and button our coats against the cold wind off the night sea. Standing side by side, wearing gloves, my mother and I would scan the dark water with our binoculars, searching for the faint lights of a tiny black boat, listening for the faint hum of a motor.

And hoping for the day—Would that day ever come?—when mothers and daughters no longer stood at the top of a dark abyss, searching the restless sea for mothers and daughters who had been driven by humanity's madness to abandon their homes in a war zone.

Yes, we searched for refuges on their long desperate journey to find a new home . . . a home which might, perhaps, welcome them.

Part II

**And Neighbor Shall Reach Out
To Neighbor**

Chapter Five

The key was education, especially a willingness to *be* educated.

One of the great differences between men and women is that men are so certain that they know it all, and so they stop learning. Whereas women, quietly watchful, unrelentingly curious, are always willing to learn. Just look at a book club: a dozen women will read a book and then gather to talk about it. But how often do you find a dozen men talking about a book?

And so, when the right teacher came along, a teacher who started with algae living beneath the ice, and who ended with the nuclear weapons that first we feared and then we forgot, until they came roaring out of the Arctic night . . . the women listened. Because the teacher was a woman, whom the men would scoff, and whom the women would recognize as the voice which they had long and desperately needed.

Her name was Aili Biriita Gaup, a Sami name, for she was a Sami student at the law school, three years ahead of me when I entered as a student in August of 2019. She was known among the other students for *not* speaking, except in class, when she would raise her hand and analyze a case with perfect Norwegian grammar, tinged with her Sami accent. The teachers admired her, for she never missed a class and seemed to have read every article they assigned. She would serve her people well, everyone agreed, when, upon graduation from law school, she would defend her Sami people's rights in the Norwegian courts of law.

But she had a special talent which few south of the Arctic Circle knew about. She was more than a brilliant student who would become a brilliant attorney. She was a teacher, who could reach with her clear voice into the hearts of women—women around the world—and encourage them to find their own heroic strength. Who could explain to them, crystal clear, what sort of catastrophe they were headed for, unless they themselves assumed full responsibility for the future of their planet. Yes, she was concerned about the fate of the Sami tundra and the reindeer, and she was urgently concerned about the fate of her Sami people. But her vision reached far beyond the Arctic. Her vision encompassed the entire planet.

She spoke primarily to women, although an increasing number of young men listened as well. She awakened them from their apathy and their despair. She taught them what they instinctively knew to be right. And she created leaders among them,

so many new leaders that no opposition—not even the most powerful corporations—could win the final battle in court.

Aili Biriita came from a people who had lived for thousands of years on the Arctic tundra. She taught us well. And we, the women of the world, proved to be excellent students.

She started with the algae and she finished with the nukes, and then we knew exactly what to do.

* * * * *

I first met Aili Biriita on that day in January of 2018 when the high school girl, just back from Lesvos, nicely dressed and very nervous, visited the Norwegian Center for Human Rights. My mother had coached me. I could explain, concisely in one minute, my work as a volunteer with refugees on the Greek island. I could refer to various courses taught at the Center for Human Rights, showing that I had carefully studied the website. And I had some questions which I wanted to ask.

I rode the morning train from Ås to my favorite station in Oslo, National Theater. I say my favorite because that station was close to the Concert Hall and the symphony orchestra which I loved. It was close to City Hall, where once a year in December, Norway gave the world a moment of hope. And it was close to the wharf and the harbor, where I loved to stand at the very end of the pier, looking south at the long stretch of Oslo Fjord . . . and thinking about the ships which had sailed out to sea for the past thousand years.

But on that particular day in January of 2018, I walked on the icy sidewalks to a new destination, a place that both intrigued me, and frightened me.

I almost fell on the ice, even though the city had sprinkled gravel on the thick gray sheets that covered every sidewalk. Old people spent much of the winter inside, afraid of breaking a hip. This was the second winter in a row of global warming weather in Oslo: warm temperatures right around zero, with rain at plus one or two, which turned to ice at minus one or two. The good old days of deep fluffy snow, which packed down to firm footing, had been replaced by our modern “weird” weather. It seemed a symptom of our world. Thick dangerous ice, where once people had walked on cold dry snow. And yet, no one seemed to mind. They sprinkled more gravel on the ice and kept walking.

I spotted the yellow building which was in the picture on the website, exactly where the map had shown it to be. My heart thumping, I walked to the door, found the doorbell labeled Norwegian Center for Human Rights—I closed my eyes for a moment and remembered Nikos passing the unconscious girl into my arms—then I pressed the button.

A buzzer released the door, which swung inward. I stepped into a gray entrance hall, utterly unattractive. I spotted a directory sign beside a glass door leading to the stairs. I waited while a cluster of people came out through the door, then I stepped through it and climbed the stairs to the second floor. Another bland hall. I found the right door, opened it and stepped into . . . another world.

I peered around at one large room, divided into various areas where people could sit and talk. I glanced at a table covered with journals, then at posters on the walls from places around the world. I spotted a classroom off to the right; the door was open, so I could peek in at students listening to a lecturer who pointed at something on a screen. Even with a short glance, I could tell that the students had come from a number of countries.

Now I noticed a sign over a door at the far end of the room: Bibliotek. The library, which I so much wanted to explore.

As I stepped toward the reception desk, I remembered my mother's words on the platform of the Ås train station as I boarded the train, "You'll do fine, Sweetheart." Then I said to the bright-eyed Nordic woman who looked up from her laptop at this young stranger, "I would like to learn about your human rights program. I am a student in high school still, but I think that . . . I would very much like to work in the field of human rights."

"Yes," she said with a welcoming smile. "You have come to the right place. Do you have an appointment with anyone?"

"No, but . . . I would be very glad to make an appointment and come back."

"Well, let's see if someone is here for you to talk with. It's coffee break time, so most folks have come out of their offices to our little café." She gestured to a long table in the second half of the room, where a half-dozen people were quietly talking with each other. Most of them were women. "Would you like a cup of coffee?"

And then, instead of just waving me on, she stood and came out from behind her desk, offering her hand. "I am Inger. And you are . . .?"

“Anna Katerina Ødegaard. You may call me Anna. I am a student at Ås high school. I just returned from working for two weeks with refugees on the Greek island of Lesbos.”

I stopped. Let that be enough.

“Lesvos!” Inger gave my hand a hearty shake. “You were on the beach?”

“Yes, usually at night. I was on night patrol.”

“Well then, you’ve already dipped your foot into the waters. Come, I’ll introduce you to the gang.”

And so, for the first time in my life, I stood not in front of a bunch of kids my age, but in front of a group of professional people who looked with interest at someone who had just returned, as Inger told them, from working with refugees on Lesbos.

Yes, they were professional people . . . with whom I already knew I wanted to work, as a colleague, as a friend, for the rest of my life.

A woman stood up and offered her hand. “I am Berit Andersen, chief in charge of this boisterous group.” We shook hands while the others made joking comments in the background.

Berit asked me, “Were you with a relief group on Lesbos?”

I said proudly, “Dråpen i Havet. The best group of people I have ever worked with.”

“Ahhh, Dråpen i Havet.” I could see the respect in Berit’s eyes. “Please, Anna, have a seat. We have,” she pointed at an open box on the table, “plenty of breakfast rolls.”

As Inger set a white coffee cup in front of an empty chair, she said to the group, “Anna is a prospective law school student. She would like to know more about our programs.”

I took off my coat, then I sat down while a woman, perhaps a professor from India, gracefully poured steaming coffee into my cup. “I am Maadhavi,” she said. “I teach courses about women in conflict.” She laughed, “Too many courses. Too many conflicts!”

“Thank you,” I said as she filled my cup. “That is just what I am looking for. Many, many courses.”

“Tell us about Lesbos,” said a man across the table from me.

And so I did, with no long preamble explaining why I was on Lesbos with my mother, but starting instead with the moment when, driving in our car at night along the coastal road beside the cliff, I first spotted the faint light out on the dark water of

the Aegean Sea. I told them about the Spanish lifeguards in their rescue boat, and about Nikos wading into the water in his wetsuit to meet the refugee boat filled with people shouting and wailing. About Nikos calling my name and lifting into my arms the unconscious child. About carrying the child up the beach to where my mother, a nurse, opened the girl's sodden jacket and listened with her stethoscope to the girl's heart, beating faintly.

Yes, and I told them about taking the girl and her mother to the Lighthouse Camp, where they sat in chairs in front of a fire burning in a barrel. About the other refugees who soon arrived, and how they gathered around the three barrel stoves, some in family clusters, some—mostly teenage boys—alone and lost. And about one refugee, an elderly man, who collapsed into a chair in silent, desolate grief.

I mentioned the bowls of hot soup and fresh bread, and the neat beds in a warm tent . . . and then I looked at the people seated around the long table, people who listened in absolute silence, and I asked them, “Why . . . *why* do a mother and her little girl have to struggle through such a nightmare, while another mother and her daughter can get on a big modern plane and fly home to their nice, safe city in the north?” I tried to explain, “It's as if there are two totally different worlds on one planet. One is a world where wars can go on and on forever. And the other is a world where,” I gestured toward them, “there is a place where a girl can come to ask for answers.”

Berit stared at me, then she asked, “You are a high school student?”

“Yes, at Ås high school. I have another year and a half until I graduate, in June of 2019. I wish so much,” I pointed over my shoulder, “that tomorrow I could be in that classroom.” I pointed at the sign over the door at the end of the room, Bibliotek. “I wish so much that I could spend a month exploring your library. I want to know: Do mothers and children in a war zone have any rights? Do refugees trapped behind all the closed borders have any rights? And what kind of shabby governments are the governments of the world today that let the horrid wars go on and on?”

I paused, and then, bursting with questions, I asked, “Who is manufacturing these hideous weapons? Who is profiting from the weapons? Yes, and I want to know, What is the history about the evil twins, war and oil, oil and war? And what happens when we—Norway included—begin to drill for oil in the Arctic? What happens when the American navy and the Russian navy start growling at each other like two angry dogs . . . at the top of the world?” I finished, exasperated, “Are we going to fight World War Three for the last few barrels of oil?”

The room was silent. Had I said too much?

Then a woman at the far end of the table—a young woman, perhaps even a student—who had not yet spoken, said to me, “Bures.”

I looked at her, at the strength in her face, at the determination in her eyes. “I’m sorry. I didn’t catch what you said.”

“Bures.” She smiled faintly. “That is Sami. It means, ‘Hello.’”

“Oh,” I said. “Bures.”

Berit introduced her colleague, “Anna, this is Aili Biriita Gaup. She is a third year law student, who had come to meet with me in my office this morning. So we invited her,” Berit laughed, “to compare our office coffee with *real* coffee made over a campfire.”

“Not so bad,” said Aili, grinning. “A little weak, but not so bad.”

Berit continued, “Aili is doing research in our library, as well as in the law school library, as well as in a dozen online libraries around the world, about, as you call it, ‘the history of the twin evils, oil and war’. Because, as you have just noted, the big oil companies, including the Norwegian company Statoil, are getting ready to drill for oil in the Arctic—initially in the Barents Sea—not far from the Sami tundra. Not far from the Russian tundra, where the Russian Sami live. And you are absolutely right: when the oil ships arrive, the military ships will be close behind.”

I looked again at Aili. She stared at me, but she did not speak. Not yet. She was still gathering evidence.

Then Berit, without my even asking, opened a door for me. “Anna, I think that we can put together a program of research which you can pursue during your final year and a half of high school. I have long wanted to teach a supplemental course called, The Literature of War, in which students would read the great novels, and the great journalism, written through history . . . which address the scourge of war. And I have also long wanted to teach a supplemental course called, The Photography of War, going back to the early black-and-white pictures of the American Civil War . . . then following that historical record right up to pictures and YouTubes from the hideous war today in Syria. Perhaps you could help me, during your time still in high school, to gather material for such courses.”

I could not believe . . . I was so grateful . . . I . . .

“I would be very glad to help you.”

She added, “While, of course, keeping up your grades. Our admission standards are very high.”

“Of course.”

Berit glanced around the table at her colleagues. “Although our library is usually reserved for students of law, perhaps we could make an acceptance for an unusually motivated high school student.”

I heard murmurs of approval.

Berit turned to Aili. “Harriet, our librarian—who unfortunately is home today with the flu—tells me that you, Aili, are able to find things in the library which even *she* could not locate.”

“It’s not her fault, Berit. To find the word ‘Sami’ in the early Norwegian law books is not an easy task. They preferred, back then, that we simply did not exist.”

“Yes. Well, I wonder if you could show Anna around the library. You might start with refugee rights, and work your way to polar bear rights.”

“It’s the algae, Berit, the algae that grows on the bottom surface of the Arctic ice. We need to be discussing the rights of the Arctic algae.”

“Aili, I feel sorry for the Prime Minister of Norway on the day you get your law degree.”

Aili smiled faintly, but did not speak.

At the end of the coffee break, I shook hands with everyone—it seemed that everyone wanted to shake hands with *me*—and then I accompanied Aili into the library. She walked me through the shelves, showing me the various categories of books, then she introduced me to several monthly periodicals that I might want to read.

“We should meet at the law school library as well,” she said, “where you’ll find a much broader range of books and journals. All the original old tomes are there, bound in leather.”

Now we sat down at a computer and she showed me, “just for starters”, a dozen websites in the field of human rights: Nordic websites, European websites, United Nations websites, even a Russian website. She pasted the website addresses onto a growing list, which she—I gave her my own address—emailed to me.

Then she showed me websites in a different category: “indigenous” websites, beginning with a Sami website in Sami, Norwegian, and English. She introduced me to an Aboriginal website in Australia, a Mayan website in Guatemala, then several Arctic websites from the indigenous peoples of Alaska, Canada, Greenland, Sweden, Finland, and Russia.

“One more,” she said, and now she showed me the dramatic Sioux website from Standing Rock, where a growing number of Native American nations were protesting the oil pipeline. I stared at powerful pictures of peaceful people—men, women and kids, some in their tribal shirts and feathers, some in day-to-day clothing—confronting groups of men in full battle dress, carrying military weapons, and backed by huge military vehicles. I had questions, such as, “Aili, have you been to Standing Rock yourself?”—for I had read that some of the Norwegian Samis had been there—but I was too shy to ask.

Now, very quickly, she typed an email from her address to my address, with a message of one word, “Bures.” We were connected.

“Write to me when you have questions,” she said.

“Thank you, Aili,” I said.

She typed, in a second email, “Giitu. Thank you. Ollu giitu. Thank you very much.” She pronounced the Sami words. Then with a click, she sent the message.

So I said to her, “Ollu giitu.”

She smiled, faintly. “Do you have time on Saturday morning to visit the law library? Say, at ten. That would give us plenty of time, and then I’ll show you where the law students have lunch.” She grinned. “I keep complaining that they do not serve reindeer tongue sandwiches.”

I laughed, then I told her, “Ten o’clock on Saturday morning would be great.”

“I’ll meet you at the front door to the library.” She looked at her watch, “Now I’ve got to hurry off to class.”

She put on her coat, then she said, “Maná dearvan.”

Before I could reply—I would try to replicate the pronunciation of the words—she explained that what she had said was “good-bye” when one person is *leaving*. When one person is *staying*, that person would say, “Báze dearvan.”

So I said, “Báze dearvan.”

She cheered in English, “Perfect!” And then, grabbing her satchel, she was gone.

Before I left the Center for Human Rights, I stopped at the door to Berit’s office, so that I could thank her. She was on the phone, but waved me in and handed me her card with her email. She whispered briefly, “Keep in touch.”

I thanked Inger at the reception desk. She was busy with several new visitors, but she gave me a smile and a wave.

When I stepped outside the building into the gray cold of winter, I phoned—with my new Smartphone—my mother, to give her a brief but jubilant description of my morning at the Norwegian Center for Human Rights. She suggested that she meet my train, and that we have lunch at the wonderful, old-fashioned Ås train station café. “You can tell me all about it,” she said, delighted. “We’ll celebrate with their world famous carrot cake.”

“It’s a deal,” I laughed.

Then I headed on the icy sidewalks to the National Theater train station, marveling at this new life which had just opened its doors to me.

Chapter Six

And so it came to pass, that a bored high school girl became a highly motivated high school girl who earned excellent grades for the next year and a half, because she finally had a purpose.

Actually, several purposes.

I knew that my application to the School of Law at the University of Oslo must include a transcript showing top grades.

I wanted to show Berit and the growing number of teachers whom I met at the Norwegian Center for Human Rights that the high school kid whom they allowed to use their library was worthy of their kindness.

I wanted to learn from Aili Biriita not only about how to do research in the University libraries, but about the extraordinary project on which she was quietly working. While she was learning, as one of the leading students in the School of Law, about the Norwegian legal system, she was also becoming an expert in the field of international human rights. And beyond that . . . as our friendship deepened, she explained to me that she was investigating an entirely new field of law, one which would defend not only human rights, but the rights of all life on planet Earth. “Even the Arctic algae must have rights,” she told me, “because without the algae, the entire food chain in the Arctic will collapse.”

Although she never said so—for Aili rarely talked about herself, only about her work—she was a pioneer, developing scientific arguments for the necessity of laws which had not yet been written. Her people had lived on the Arctic tundra for thousands of years, and they knew that life at forty degrees below zero was very fragile. For the Sami, life was not only precious, it was sacred. Thus she was determined to write the unprecedented laws which would protect life on planet Earth, laws which would be incorporated into not only the Norwegian legal system, but the international legal system. With those laws firmly in place, she would then turn her attention to the oil companies who were trying to break them.

Finally, I was compelled to work as hard as I could on my grades in high school, and on my research in the University libraries, because I wanted to help—somehow—Loreen and her little girl Lamar. They were living now not in Lighthouse, which was only a temporary camp for new arrivals, but in Moria Camp, the nightmare shithole which was half prison, half muddy slum, in the southeast corner of Lesvos

Island. They lived in a tent provided by an aid group, ate minimal meals provided by an aid group, saw a doctor if a doctor was in the camp (the schedule was irregular), and used a toilet which Loreen told us—in her weekly call using my Smartphone—was “worse than horrible”. This was their welcome to Europe, after fleeing the hideous, barbaric war in Syria.

Sometimes, after my mother and I had talked with Loreen and Lamar on the phone—we could hear other voices in the camp in the background—I was so angry that I could explode. The border from Greece into Macedonia and Europe had been closed since March of 2016. The Norwegian government had strict limits on any further immigration, and was even sending some refugees back to Afghanistan. For the first time in my young life, I was beginning to look at my homeland with a critical eye.

So when classes resumed at Ås high school in January of 2018, I was motivated. I told my teachers about my experiences on Lesbos, told them that I had visited the Norwegian Center for Human Rights, and delighted them by announcing that I would now do my best to be a top student in their classes.

My teacher in social studies gave me an entire period to talk to the other students about my trip to Lesbos. I prepared my presentation well, with some good pictures which I had taken. I practiced a couple of times at home, so that the talk lasted exactly fifty-five minutes. My teacher was impressed, and the students—my friends—were a little stunned, I think, that I had actually done such a thing.

I was able, after that talk, to convince the high school principal to grant me one day a week free of classes at the high school, so that I could do research in the Center for Human Rights library. I would write a number of essays on various research topics, which I would hand in to my high school teachers as part of my “self-designed studies” program. I was very grateful, to the principal and to my teachers, for enabling me to take this step from high school to the University.

And *they* were grateful, because the girl who before had slouched at her desk with a frown of scornful silence . . . now brought a level of energy into the class which, gradually, motivated the other students to join into the discussions.

Yes, and so it came to pass . . . that every week through the spring semester of 2018, I spent a day in the Center library, investigating the relationship between, as Magnus had called them, “the evil twins, oil and war”. I quickly realized that I could write an entire doctoral dissertation on that subject, which began during World War

One, when the British invaded Iraq and commandeered Iraq's oil, right up to the present day, when the Oil Boys from Texas—and the Brits—were busy, busy, busy in Iraq.

Eager to learn, I pursued a parallel research project. With generous guidance from Maadhavi, the professor from India who focused on Women in Conflict, I began to study the human rights of women, especially women trapped in a war or in a refugee camp. The more I learned, the more outraged I became at the enormous disparity between how the world *should* be . . . and how the world actually was today. I felt that I was arming myself, even before I had entered law school, for the battles ahead.

With guidance from Aili, I learned about the numerous—I had been so ignorant, so oblivious—conflicts in which indigenous peoples were battling for their rights, for their land, for their future. On every continent, tribes which had lived in harmony with the land for eons were now battling bulldozers, chain saws, and assassins.

I kept in mind Berit's request that I help her to develop a new course on the Literature of War, on the Journalism of War, and on the Photography of War. Perhaps it had been just a light comment, tossed out to a visiting high school student, but I took the challenge seriously. I talked with my literature teacher in Ås, and we began to compile a list going back to Homer's tale about the Greek war in Troy (which I read, after my brief visit to Greece, with great interest), right up to the surprising number of books by Norwegian authors about World War Two and the German occupation.

Ulf Jensen, a professor of journalism at the University of Oslo, introduced me to the work of Margaret Bourke-White, a great American war photographer working in both Europe and Russia during World War Two. Ulf loaned me a book of her stunning black-and-white pictures, a book which I kept open in my bedroom on its own little table, turning the page every day to a new window on the horrors of war.

Ulf—who became a great friend and followed my career all the way through law school—also introduced me to Jonathan Schell, an American journalist who had been one of the earliest witnesses of the American war in Vietnam. I read “The Village of Ben Suc”, published in **The New Yorker** on July 15, 1967 (my English was definitely improving because of such research), and began to understand the male ignorance, the male arrogance, and the male belligerence that go into the making of an utterly pointless war.

Aili spent a considerable amount of time helping me to master “the three-page essay”. If I could condense everything I had learned about a subject—any subject—into a logical three-page essay, she told me, “with writing that is crystal clear”, then I

could write a master's thesis, I could write a doctoral thesis, I could write a brief for a judge.

The first paragraph, the **Introduction**, introduced the theme of the essay with no more than three sentences.

The subsequent paragraphs, in the **Development**, each contained a "topic sentence", the key idea of that paragraph. The topic sentence was supported by other sentences which provided evidence, explanations, quotations, and examples.

Aili taught me to highlight the one topic sentence in each paragraph with an orange highlighter, and then to read *only* the topic sentences. They should be clear steppingstones, taking the reader step by step through a logical flow of ideas from beginning to end.

Finally, the last paragraph, the **Conclusion**, summarized the argument with no more than three sentences.

Put a title at the top, "short and to the point," said Aili, "not one of those horrible, bland academic titles." Give credit to your sources with footnotes and bibliography. Read the essay one more time when you are fresh in the morning. Then send it out to the world.

And so I did. I gave each essay that I wrote to my mother (and eventually to my father, as he became interested), for her appraisal. After making any necessary corrections, I gave a copy to a teacher at Ås high school, as well as to a professor at the Center. And of course to Ulf, my journalism mentor.

I kept a copy for myself, in a growing collection which gradually filled a blue ring binder. When I applied, during my final year of high school, to the University of Oslo, I submitted with my application not only a transcript with consistently high grades (for the past year), but also—something not included with most applications—a compilation of eighteen essays on a broad range of subjects, ranging from human rights to refugee camp conditions to the power of wartime photography. My bibliographies showed the extent of my research in the University libraries. (Berit mentioned to me, after my acceptance, that the admissions office had been impressed.)

* * * * *

I must describe, however, the darker side of all this research. I had not expected such a deep emotional response from reading what became a growing multitude of

articles and books, from libraries as well as online, about, as Magnus had called it, “the plague of war”.

Mathew Brady’s photographs of dead soldiers during the American Civil War, pictures taken by French photographers of soldiers dead in their earthen trenches during World War One, pictures taken by Russian photographers of soldiers frozen at their guns in snowy trenches during World War Two, pictures—in color now—from Vietnam, from Ruanda, from Srebrenica, from Afghanistan, from Iraq, and especially, from Syria—endless pictures of dead civilians in Syria, so many of them children—all of these pictures in open books on that little table in my bedroom . . . overwhelmed me with a sadness that began to haunt me, especially at night.

I remembered that moment on Lesvos when my mother and I, with Magnus and Anne Kari, had stood in a circle on the beach looking down at a desperate mother holding her unconscious daughter. I had felt, for the first time in my life, the grief—the huge, black, overwhelming grief—for strangers to whom I could not even say “Hello”. That was when I understood, for the first time, that the word “humanity” meant “all of us”.

Now that grief was with me again, held in abeyance during the day when I felt that I was working with a purpose, and making steady progress. But at night, I would fall asleep almost immediately, exhausted from the days crowded with work . . . and then wake up sometime after midnight, scared, lonely, at the brink of tears.

One particular book hit me very hard. Harriet, the librarian at the Center, pulled a small paperback from a shelf and handed it to me: **The Arms Bazaar**, written by a British journalist, Anthony Sampson, published in 1977. This deeply researched book examined the international weapons market through most of the 20th century, and it had a consistent theme: men devoted their lives to making and selling weapons, never mind the consequences. Salesmen from rival companies, be they European or American, outdid each other to persuade governments around the world, especially governments wealthy with profits from oil, to buy their weapons. Because so much oil came from the Middle East, both the Shah of Iran and the royal family of Saudi Arabia became prime customers. After World War Two, weapons poured into the Middle East, to such an extent that the price of weapons influenced the price of oil. Weapons poured into the newly independent countries in Africa. Weapons were “battle-tested” in Vietnam, and then they were promoted—yes, advertised—as “battle-tested” at the arms bazaars of the world. No one seemed to consider for a moment, in their offices in London and Paris and Rome and Moscow and New York and

Washington and Georgia and Texas and California, that all of these weapons, which brought in so much money, would one day be *used to kill people*.

Again and again, I read that weapons provided *jobs*, thousands of *jobs*, for the loyal, highly skilled employees of major corporations. Never did I read that these flag-waving employees thought for a moment about the thousands of *corpses* which they would create . . . somewhere on the other side of the world.

Throughout the entire book, I read about men and men and men and men. If a woman was ever mentioned, she was a wife (usually nameless) who had accompanied her husband on a business trip, or she was a hot honey hired to serve drinks at an arms convention.

It wasn't just the weapons. It was the mentality. It was the ancient way of thinking, from Sampson's jawbone of an ass . . . to George Bush's cruise missiles.

We had to get rid of that mentality if we were ever going to stop the madness of war.

Which meant, of course, that the time had come—it was long overdue—for an entirely new *dramatis personae* to step onto the stage of the world.

Grief, outrage . . . and determination.

While I lay in bed at night so scared, so lonely, so filled with a hideous, black, overwhelming grief . . . I realized that out of that grief came strength. The deeper the grief, the greater the strength.

And then I wanted to say "Thank you", to my mother, to Loreen and Lamar, to Nikos, to Magnus, to Berit . . . and especially to Aili Biriita, who felt not only her own grief but the grief of her people, as the Arctic ice cap melted. And who felt the *outrage* of her people, as the oil ships and the military ships, encouraged by the melting of the Arctic ice cap, prepared to take advantage of this new bonanza.

Yes, during that year and a half, as the mentor tutored the apprentice, Aili's strength became my strength. Became *our* strength, as growing numbers of women around the world heard her voice, and shared her vision.

Chapter Seven

So much more I could say, but we need to get to that auditorium—the largest auditorium at the University of Oslo—where on a Saturday afternoon in May of 2019, a few weeks after my acceptance to law school, and a couple of weeks before my graduation from high school, Aili Biriita spoke to a full house.

And to the world, because her four-part lecture was filmed. During the summer, the film would be edited, and given subtitles in a multitude of languages, so that in September it could be sent electronically to classrooms around the world. To churches around the world. To indigenous peoples around the world. And to anyone else who might be interested.

During the spring of 2019, I helped Aili as her research assistant. And on the day of the lecture, I helped by putting pictures and graphics up on a giant screen.

* * * * *

“The most important event in your life today,” said Aili Biriita, standing at the edge of the stage (not behind a podium) in her bright blue-and-red Sami dress, holding the microphone in one hand while she swept her arm toward the audience of nearly a thousand people, “. . . is the melting of the Arctic ice cap.”

Her voice not only reached every person in the auditorium; it grabbed them by the shoulders and shook them.

“The most important event in your life today . . . *today* . . . is not your exam at the end of the semester, although that is very important. The most important event in your life today is not your hot date on Saturday night, although that too is very important.” She paused. “The most important event in your life today is the melting of the huge curving sheet of ice which caps planet Earth. That ice has capped the top of the planet for roughly three million years. Scientists debate that figure, but we can safely say that the ice has capped our planet for a long, long time. And it has been doing an extremely important job.”

She walked along the edge of the stage, staring with her stern eyes at her audience. For most of the people, certainly for most of the students, I think it was the first time they had ever heard a Sami speak.

“For three million years, that thin, fragile cap of ice, only a few meters thick, has reflected the light from the sun every summer, keeping the water beneath it very cold. That cap of ice floats on the Arctic Ocean, expanding in surface area during the long dark Arctic winter, and shrinking during the sunny days and sunny nights of the Arctic summer. For eons of time, that ice has reflected roughly ninety percent of the sunlight from our neighboring star. For eons of time, that ice has protected the water beneath it from overheating. But now,” she paused, “that ice is melting.”

Seated at a table in the dim light at one end of the stage, I clicked a button on Aili’s laptop. The audience could now see, on the large screen behind her, an extraordinary photograph taken from a satellite of the top of planet Earth at night. Against the absolutely black background of space, we could see the dark gray ice cap ringed by a giant circle of northern lights. The vertical flames of green and pink rose above the planet like the ring of blue flames on a gas stove. I could hear a murmur from the audience: our planet was strikingly beautiful.

The ring of green northern lights stood above northern Canada; it cut across the middle of Greenland; it stood above northern Europe. We could see, on the nighttime half of the planet below the ring, the lights of the major European cities, and thus we could verify (some of the people in the audience were pointing) that yes, the northern lights stood right over Norway. The ring stood above northern Russia . . . and on the far side of the planet, where we could not see, it stood over Alaska.

That was our planet, a dark ball in black space with a gorgeous crown of green and pink flames. A dark ball on which people lived in their tiny cities.

Inside the ring of shimmering green, the ice cap itself touched northern Canada, wrapped over the top of Greenland, and touched part of northern Russia.

“Keep in mind,” said Aili, “that the ice cap is as thin as the shell of an egg. As *fragile* as the shell of an egg. As the ocean on which it floats becomes warmer and warmer, the ocean melts the ice from *underneath*, so that the ice, only a few meters thick, becomes thinner and thinner.”

She paused.

“Why,” she asked, “is the Arctic Ocean becoming warmer and warmer?”

Someone in the audience called out, “Because of climate change.”

“But what has caused this climate change?”

“Burning coal and oil.”

“Yes. Thank you. Since the beginning of the Industrial Revolution in 1750—and thus for roughly two hundred years and seventy years—a growing population of

human beings has been burning increasing amounts of first coal and then both coal and oil, sending smoke up millions of chimneys into the sky. This smoke contained carbon dioxide, which formed a blanket around the planet, a blanket that became thicker and thicker. It was, and is, a special sort of blanket, because it allowed the sun's light to pass through it, so that the light shone on the Earth . . . but when that light changed into heat, the blanket trapped most of the heat. The heat could no longer escape out into space. So the planet slowly became warmer and warmer. The air became warmer. The land became warmer. And especially, the oceans became warmer."

She paused. Aili was a master of the long pause.

"Because, you see, water can hold a great amount of heat. Put a pot of water on the stove and heat it. That water will absorb the stove's heat for twenty minutes before it finally begins to boil. So much heat . . . that you would never stick your hand into that hot, hot water.

"In the same way, the oceans have absorbed most of the heat which has been trapped by that thick blanket of carbon dioxide. We burn coal and oil . . . and we thus heat the oceans. As the Arctic Ocean becomes warmer and warmer, it melts the underside of the sheet of ice which floats on top of that ocean. The warming water also melts the ice along the edges of the ice cap. Satellites have been measuring the Arctic ice cap since 1979—for forty years now—and the evidence has shown that the Arctic ice cap has shrunk by roughly fifty percent during that very short time in the history of planet Earth."

I clicked on a new picture, an illustration of the Arctic ice cap during the summer of 2018, surrounded by large stretches of open water. A red line indicated the summer boundaries of the ice cap back in 1979, when the ice had touched the northern coast of Russia, had reached much further south into northern Canada, and had wrapped a long arm around the eastern side of Greenland.

"*Half* of that summer ice is already gone, and the rest is melting at a rate which now accelerates every year. Because every year, as you well know, is hotter and hotter, both summer and winter, setting new temperature records around the planet.

"Unlike the ice, which reflects roughly 90 percent of the sunlight, the growing area of open water around the shrinking ice *absorbs* roughly 90 percent of the sunlight which shines upon it. Light energy becomes thermal energy, heating the water, so that the Arctic Ocean becomes warmer and warmer . . . at an accelerating rate. Of course, the warming water heats the ice from below at an accelerating rate. The ice becomes

thinner and thinner, more and more fragile. The ice cap also shrinks around the edges. An Arctic storm, which beats on the surface of the ice cap with its winds, and batters the edge of the ice cap with its waves, can crack that fragile sheet of ice. And when the ice cracks, warm water seeps up *into* the ice, warming it from inside. All of this is happening today, and it is happening faster and faster.”

Aili walked along the edge of the stage, holding her microphone down at the end of her arm. Her Sami boots, with their turned-up toes, sounded like the footsteps of Doom.

“But something more is happening,” she said.

I clicked to the next illustration, which showed the many ocean currents that flow through the Arctic at the top of the planet. The currents were shown as red at the surface (such as the Gulf Stream, which becomes the North Atlantic Drift), and as blue at the various depths to which the currents sink.

“Did you know that so many currents flowed through the Arctic? The picture looks like a map of the Metro in Paris, circling around Arch de Triumph and then branching out along the Bois de Boulogne.” This was a Sami speaking, a Sami very aware of the world beyond the tundra. “Those currents are great rivers of sea water flowing through the Arctic region, picking up the extra heat from the warming Arctic Ocean. We do not know how much heat they pick up—so much research needs to be done—but clearly by passing through waters which are increasingly warm, the currents will pick up some amount of this unnatural heat. And they will carry this heat with them as they flow around the entire planet.”

I clicked to the next illustration, a global map which showed the multitude of currents, red and blue, which flowed between the continents around the world.

Aili told her audience, “What happens in Las Vegas may stay in Las Vegas, but what happens in the Arctic will reach out and touch the entire planet.”

She walked back along the edge of the stage, holding her microphone down so that her audience could hear her steps. Like the ticking of a clock.

“But something more is happening. The warming Arctic Ocean warms the winds which blow over it. The warming winds blow over the land at the top of the planet—the land of northern Scandinavia, of northern Russia, of Alaska, of northern Canada, of Iceland, of Greenland—*warming* that land. And now a new set of dominoes begins to fall. Because just beneath the surface of that land is a sheet of ice and frozen ground, the permafrost—permanently frozen ground—which is a remnant of the last ice age.”

I clicked to a photograph of a person standing beside a sheet of ice almost ten meters thick, capped by a carpet of tundra.

“As the warming winds warm the land, the permafrost thaws at an increasing rate. The land becomes soft and spongy. And gasses begin to seep up, both carbon dioxide and methane. These gasses come from the decay of ancient organic material, primarily plants which had lived at the top of the world before the most recent ice age. Microbes such as bacteria fed on the plants, releasing carbon dioxide and methane . . . until the ice age froze the land and trapped the gases. Now, as the permafrost thaws, those gasses seep up into the atmosphere, at an increasing rate.

“Most of the gas is carbon dioxide. Only 2.3% is methane. But methane forms a much thicker blanket around planet Earth, trapping far more heat.”

She paused, then she said with a warning voice that reached into the heart of every listener in the auditorium, “Methane is the Monster.”

Again she paused. Now she repeated, her voice a ghostly whisper into the microphone, “Methane is the Monster.”

The auditorium was absolutely silent.

“How much methane is now trapped by the permafrost, waiting to be released? We do not know. How thick might the methane blanket become? We do not know.

“How quickly might the methane be released? It all depends on how quickly the Arctic ice cap melts, which, as we know, is happening at an accelerating rate.

“How long before the Arctic ice cap melts completely? We do not know.

“How warm will the Arctic Ocean become? We do not know.

“How much carbon dioxide and methane will be released? We do not know.

“How much will these additional gasses warm our Earth? We do not know.

“How long will these additional gasses remain in our atmosphere? We do not know.

“But we *do* know that the warming of the Arctic atmosphere weakens the jet streams, a process which greatly affects the weather in the northern hemisphere of our planet. The melting of the Arctic ice cap, which warms the ocean, which warms the winds, which warms the upper atmosphere, which weakens the jet streams . . . can bring floods, or droughts, deep cold or severe heat, to regions as far south as northern Africa. We have already seen pictures of snow in Jerusalem.”

I clicked to a photograph of children making a snowman . . . in a city with a golden dome in the background.

“Read your Bible, and count the passages from Genesis to Revelations in which snow is mentioned in the land of donkeys and olive trees.”

Aili paused.

“And of course, the final question: For how many centuries will all of this continue?” She almost shouted, “For how many *centuries*?”

She said, very slowly, “Once more the answer is: We do not know.”

I clicked: the screen went dark.

Aili stood for a long moment at the edge of the stage, scanning the audience from the front corners to the back corners, and now down through the middle.

Three cameras were filming her presentation; on separate laptop screens, I could see their three images, which later would be edited into the unprecedented film that would go out to the world, subtitled in a multitude of languages. One camera followed Aili in her red and blue Sami dress, sometimes showing her entire figure on the stage, sometimes moving in for a close-up. The second camera covered the audience, sometimes with a wide-angle shot, sometimes moving in for a close-up of particular people.

Now, as Aili scanned the audience, one camera moved in for a close-up of her stern face, her staring eyes.

The second camera moved from face to face in the large audience, showing university students, high school students, grade school students, teachers, parents, administrators, church ministers, politicians, bankers, business executives, farmers, fishermen, shopkeepers, and retired grandmothers and grandfathers—native born and immigrants—as they stared back at her with solemn faces.

Mixed among these people, who were primarily from Oslo and the surrounding towns, were at least a hundred Sami people, adults and children, wearing shirts and dresses—their Sami *gakti*—with colors characteristic of the Arctic regions where they had come from. The Sami were scattered evenly throughout the audience. They were here, they were real, and they were listening.

The third camera—actually a direct link—showed with excellent clarity the pictures which appeared on the screen.

Finally Aili said, “Let’s take a look at another set of dominoes.”

I clicked to a photograph taken in the sea beneath the Arctic ice cap, of a pale green layer of algae growing on the bottom side of the ice.

“During the past ten years, scientists from several countries have been studying the role of sea ice algae in the Arctic food chain. Special forms of algae have adapted to the cold water of the Arctic. They are able to live—to *flourish*—on the bottom surface of the thin ice at the outer edge of the ice cap. The faint sunlight shining through the ice is enough to power photosynthesis within the one-celled algae. The algae blooms in the spring, when the sun returns to the Arctic, and thus the algae becomes a vital source of food for zooplankton—small animals such as copepods and krill—which in turn become food for fish such as the Arctic cod. Seals eat the cod, and polar bears eat the seals.”

I clicked to an illustration of the Arctic food chain.

“But what happens as the Arctic ice cap melts? The algae gradually lose their habitat. The krill lose their grazing grounds. The cod lose the krill, the seals lose the cod, and the polar bears lose the seals. An entire food chain, in one of the major oceans on planet Earth, collapses.”

She paused.

“Keep in mind that as the Arctic Ocean is warming, it is also changing in chemistry. The melting ice which caps Greenland is pouring vast amounts of fresh water into the surrounding ocean, reducing the salinity . . . the percentage of salt in a portion of sea water. And just as the oceans have long been absorbing the heat trapped by the carbon dioxide and methane blankets, the oceans have also been absorbing vast amounts of carbon dioxide from the burning of coal and oil. Carbon dioxide combines with water in the oceans to form carbonic acid: $\text{CO}_2 + \text{H}_2\text{O} \text{ form } \text{H}_2\text{CO}_3$.”

I clicked to a graphic with that equation.

“Thus, the oceans are becoming warmer, less salty, and more acidic. If the blood flowing through your veins were to change in chemistry and temperature . . . as much as the water flowing through the oceans has changed . . . you would become extremely sick. And eventually, you would be dead.”

Aili walked along the edge of the stage, holding the microphone down so that her audience could hear, as she stepped firmly in her boots, the footsteps of Death.

She faced her audience.

“Do you understand now why I began by saying that the most important event in your lives today is the melting of the Arctic ice cap? The top of our world is *dying*. While we fight our endless wars, and go shopping in the malls, and fly off to another vacation in Thailand.”

With a click, the screen went dark.

She asked, with a voice that called out to every listener, “How long before the Arctic ice cap is gone? We do not know.

“How warm will the Arctic Ocean become? We do not know.

“How long before the permafrost reaches a *tipping point* . . . when it becomes rotten ice and slush, and releases vast amounts of carbon dioxide and methane? We do not know.

“How warm will the world become, with these new blankets wrapped around it? We do not know.

“The warmer the oceans, the more powerful the hurricanes. How much more powerful will the monster hurricanes become? We do not know.

“Warmer atmospheres can hold more moisture, which results in greater rainfall and thus greater floods. What sort of monster floods will devastate our cities and farmland in the future? We do not know.

“Warmer atmospheres can also produce severe heat waves and drought. Drought can lead to the collapse of agriculture. The loss of food can lead to starving, desperate refugees, refugees who will move in massive migrations across continents in search of food, of water, and a safe place to live. How many droughts, and how many refugees? We do not know.

“And how long, I ask again, will these unprecedented catastrophes continue to batter our world? For how many barbaric *centuries* will people struggle to survive?”

She paused.

Then she said slowly, “We . . . do . . . not . . . know.”

Now she relaxed, and she said with a calm, almost casual academic voice, “We’ll take a ten-minute break now, and then I’ll be back with one more set of Arctic dominoes.”

The spotlight on her went dark. Aili as a dim figure crossed the stage toward the left wing. As she passed me, she gave me a thumbs-up and her confident smile.

Then she vanished into an offstage changing room.

Chapter Eight

A spotlight followed Aili Biriita as she walked to the front edge of the dark stage, wearing a black jacket over a black shirt, black trousers, black boots, black gloves, and a black military cap with a black visor. The audience, which had filled the auditorium with lively conversation during the break, became quickly silent.

Aili scanned the audience for a long moment, this figure in black, then she said, “I would like to examine another set of Arctic dominoes, one which may well begin near the edge of the ice cap, but which will, in the end, come crashing down on the roof of the home where you live. We are going to look at a set of unanswered questions . . . unanswered because they have not yet been asked. Many of these questions begin with three simple words, ‘What happens if . . .’”

She again scanned the audience, staring for a moment at various particular people, so that they felt—the entire audience felt—that she was studying *them*.

“Now we all know that a multitude of oil companies, from at least a half-dozen countries, are making plans to drill for oil in the Arctic. The melting of the ice cap opens increasingly large areas of ice-free water where ships can explore for oil. Ultimately, once the bothersome ice cap is gone, the entire Arctic Ocean will be open for exploration. Huge supplies of oil beneath the bottom of the sea are waiting to be tapped. Fortunes are waiting to be made.”

She paused. She was entering the dangerous waters of political controversy: to drill or not to drill? The topic had long been debated among Norwegian political parties.

“How do oil companies search for oil beneath the bottom of the sea? By blasting ‘sonic cannons’ towed behind ships.”

I clicked onto the screen an illustration of Seismic Airgun Testing, which showed a ship on the surface towing an array of sonic cannons. The illustration also showed marine life in the sea below: dolphins, whales, turtles, and schools of fish. Dotted lines showed the paths of sonic cannon blasts traveling down to deposits of oil beneath the ocean bottom, then bouncing back up again to audio monitors towed behind the ship.

“A shock wave of sound, made by releasing highly pressurized air, travels from the surface down to the bottom and penetrates the bottom, then it bounces back up again to the surface, where the shock wave is read by instruments which produce a sonogram of the bottom, indicating where oil might be found.”

She paused. “A very nice system, fine-tuned by highly skilled engineers. But there is one problem: the shock waves shatter—utterly shatter—the marine life in the sea. Imagine someone exploding sticks of dynamite in your living room every ten seconds, for hours and days and weeks at a time. Whales and dolphins, which rely on their underwater voices to communicate, become disoriented. Groups of whales which have beached themselves show bleeding in their inner ears, and extensive damage to their internal organs, where the shock waves have ripped through the soft tissues.

“Fish navigate with the help of sensors along the sides of their bodies. These sensors are devastated by the blast of sonic cannons.

“Research has shown that tiny creatures with fragile calcium shells—krill and pteropods—are shattered by the shock waves. Thus a major part of the marine food chain is destroyed.

“What about the delicate eggs, and the tiny, delicate hatchlings which continue the miracle of life in the seas? Shattered by shock waves.

“Unfortunately, research on the effects of sonic cannons on marine life is limited . . . because the oil companies never bothered to do the research. They are busy keeping their shareholders happy.”

People in the audience now perhaps began to understand why Aili was dressed in black.

“Consider the following possibility. If ships are exploring for oil near the edge of the Arctic ice cap—or even while *within* the ice cap, if they cut their way through the ice—then the shock waves which bounce back from the bottom will impact the bottom of the ice cap, battering it, cracking it, potentially shattering it. Once the ice is cracked, the warming water of the Arctic Ocean will seep up into the cracks, melting the ice from within. Thus the process of melting accelerates even more. The polar bears will soon be walking on mush. The layer of algae covering the bottom of the ice will be destroyed, and thus the foundation of the Arctic food chain will be destroyed.”

She paused.

“Maybe it would be instructive if the oil companies agreed to demonstrate their sonic cannons during a one-hour television program on a Sunday evening. Television companies could lower their microphones over the side of an oil exploration vessel, so that the blasts every ten seconds could be heard in your very own living room. We could all drink beer and eat potato chips while the plaster ceiling cracks and crumbles.”

I clicked the screen dark.

Aili walked along the edge of the stage; the figure in black held down her microphone while she stepped firmly in her black boots . . . so that the audience heard the footsteps of approaching Doom.

Stopping at the far right edge of the stage, she studied the people in the front row, studied the people in the back row.

“Extracting oil from the Arctic will require a sequence of industrial stages. First, the oil companies must explore for oil with their sonic canons. Then they build the enormous platforms. They drill for the elusive oil. They pump the oil up to the surface and load it into enormous transport vessels. And then they transport the oil to distant refineries.

“The oil companies will all, theoretically, work within their national ‘zones’, neatly drawn on a map of the Arctic. Norway has a zone, Russia has a zone, the United States has a zone, and so on.

“The oil companies will of course reassure us that they will not spill any oil. Companies which have drilled for oil in the North Sea will point out their excellent records: very few accidents, no serious spills. These companies are the pride of their home nations. And of course, they provide *jobs*, one of the main arguments behind the oil bonanza in the Arctic.”

Once again Aili scanned her audience, looking from face to face.

“But . . . what are the questions which we are *not* asking?

“For example, Do you think that all those oil vessels—from Norway, a founding member of NATO; from Russia and from the United States, two adversaries for well over half a century; from Canada, also a founding member of NATO; from Denmark, a founding member of NATO; and from potentially a half-dozen other countries, including perhaps China—yes, do you think that all of those oil vessels are going to be sailing alone around the Arctic Ocean, with no protection?

“Every single country with oil vessels in the Arctic is also going to have military vessels in the Arctic, ‘protecting their national interests’.”

Aili paused, letting her audience think about something which perhaps they had not thought about before.

“A century of evidence, going back to World War One, shows us that oil vessels are closely guarded by military vessels. Take a look at the Persian Gulf as a classic example. The seaway between Arab oil wells and the refineries in Texas is closely guarded by a fleet of naval ships—aircraft carriers if necessary—as well as by

submarines hidden beneath the surface. Those military vessels carry missiles which can reach targets halfway around the planet.

“So we are ready to ask a second question: Do we really want powerful military fleets from a multitude of countries—both surface ships and submarines—prowling the Arctic Ocean at the top of our planet? Keep in mind that these ships will carry both ‘conventional’ as well as nuclear weapons.

“As we all know, the Americans are spending record amounts of money to ‘upgrade’ their weapons systems, including nuclear weapons. Russia is modernizing its submarine fleet at two northern bases, near Arkhangelsk and near Murmansk, ports which are not so distant from northern Norway. The Boys are getting ready for the oil bonanza. Military ships from around the world will be crowding into the Arctic Ocean until . . . they reach critical mass.”

I could see, looking at the faces in the audience, that they were more than solemn. They were worried. They were scared.

“Imagine,” said the figure in black, “that an American aircraft carrier is patrolling the American zone in the Arctic, and that a Russian aircraft carrier is patrolling the Russian zone in the Arctic . . . which the Russians now claim reaches all the way to the North Pole. What sort of missiles are under the wings of the planes on the flight decks of those carriers? We will not know, because of course . . . that is a military secret.

“What sort of missiles will the submarines carry? If we do a little research in **Jane’s Defense Weekly**, we will learn that contemporary submarines carry long-range missiles, with or without nuclear warheads, capable of reaching Saint Petersburg and Moscow, or New York and Washington, within a matter of minutes.

“They can also reach the NATO airfield in Bodø, Norway. Russia and America have already bickered over that particular airfield.

“Keep in mind that many of these military vessels will be sailing close to Norway’s northern coastline. Hammerfest will have a front seat view of oil ships and naval ships going back and forth, day and night. Oil and nukes, oil and nukes.

“If you visit the Peace Research Institute of Oslo, PRIO, at Hausmanns gate 3, you can find in the library a monthly journal called **Jane’s Intelligence Review**. This journal keeps track of weapons developments in countries around the world. On the cover of the September 2017 issue, you will see a striking illustration of two submarines in the gray-green waters beneath the Arctic ice cap. The title of the enclosed article is, ‘Pole Positioning: Ice melt risks Arctic military competition’.

Already in September of 2017—the month of the election in Norway, in which voters re-elected a government which plans to drill for oil in the Arctic—**Jane’s** was warning us about the next war in a long series of wars caused by oil. Which may also be World War Three. Which may also be the final war on planet Earth.”

Aili stared out at the audience, lowered her microphone, then *stomped* her black boot. The entire audience jumped in their seats.

“A quick reminder. The Arctic ice cap has covered the top of our planet for three million years. Because this thin, curving sheet of ice reflects 90% of the sun’s radiation, it has kept the Arctic Ocean consistently cold, and thus has stabilized temperatures on planet Earth. Now as the ice cap melts, the ocean is increasingly exposed to sunlight, and thus it becomes warmer and warmer. The warming ocean melts the sheet of ice from below, at an accelerating rate.

“Sonic canons may batter the ice. A growing number of ice breakers—Russian, Canadian, Norwegian, American—will cut the ice cap into pieces. Submarines which surface from beneath the ice cap will further weaken the ice.

“Sheets of ice will break off and drift. What happens to oil rigs pumping oil when a sheet of ice—with a surface area of over a hundred square kilometers—is blown by a strong wind toward a cluster of oil rigs? The huge sheet of ice sweeps through the rigs, crushing them, and oil now leaks from a dozen broken wells.

“What if this disaster occurs in January, during the darkness of the polar night? At forty degrees below freezing?

“What happens if an oil spill in one zone pollutes the waters of another zone? Do the Russians want American vessels helping to clean up an oil spill along the Russian coast, when the American vessels are suspected—as they will be—of spying on Russian submarine ports?

“If America becomes involved in a military conflict with Russia—keep in mind the idiot who is now the President in Washington—and then calls upon Norway, as a member of NATO, to support American warships against Russian warships, what will be Norway’s response?”

The figure in black now not only stared from face to face in the audience, but began to point at individual people, as if asking them, ‘What do you think? What do *you* think?’

“As the ice cap melts—or is battered into pieces which quickly melt—the Arctic Ocean becomes warmer and warmer, because it absorbs sunlight shining on the top of the planet. What sort of storms will become increasingly common in the Arctic?

Hurricanes are born at sea, powered by the heat from the oceans. The light energy from the sun becomes thermal energy when the sunlight penetrates the oceans. Some of that thermal energy rises in droplets of evaporation from the surface of the oceans. The droplets rise up into the atmosphere, where the thermal energy becomes the *kinetic* energy of the winds in a hurricane. Thus, the warmer the ocean, the more powerful the storm.

“Imagine now an unprecedented storm in the Arctic, during the Arctic winter night, blowing oil vessels and military vessels out of their zones. Giant sheets of ice crush hundreds of oil rigs. Tankers filled with oil crash on the long Russian coast; they burst open and release immense amounts of oil. Tankers crash on the rocky Norwegian coast, spilling oil into the archipelagos and fjords. Rescue efforts and clean-up efforts are utterly impossible until the storm slowly dies.

“And what is the Norwegian Parliament going to do about all that? Take a vote?”

She pointed at the young people in the audience.

“You young people, is this the sort of world you want?”

She pointed at the older people in the audience.

“You grandparents, is this the sort of world you want to leave to your grandchildren?”

Questions. Questions.

“Now consider a step further.

“What happens if, as the result of a frozen switch, a dead radio, an impulsive, blundering politician . . . one nuclear missile is launched by mistake. Even a small one. It could even be, perhaps, a warning shot . . . which, during the darkness of the Arctic night, suddenly explodes with a fiery mushroom cloud over Siberia.”

I clicked onto the screen a massive orange fireball rising into the sky.

From the audience, I could hear cries of protest.

“The entire world immediately goes on nuclear alert. Aircraft carriers in the Persian Gulf, destroyers in the Mediterranean Sea, submarines off the coast of China, are on full alert. NATO’s missile systems throughout Europe are on full alert. What is happening in the nuclear silos in Russia? In Montana? What is happening in Israel? What is happening in Pakistan and India? In North Korea?”

The figure in black walked quietly, quietly, along the edge of the stage.

“Let me give you some figures from the International Campaign to Abolish Nuclear Weapons, which was awarded the Nobel Peace Prize here in Oslo in December of 2017.”

I clicked a chart of figures onto the screen.

“In 2017, planet Earth, the only planet on which life is known to exist, was also the home of 14,900 nuclear weapons. These are insanely dangerous weapons which threaten the future existence of life itself. The United States today has 6,800 nuclear weapons in scattered locations around the world. Russia has 7,000 nuclear weapons. 1,800 of the combined American and Russian nuclear weapons are now on high-alert status. They can be launched within minutes.

“Seven other countries also possess nuclear weapons in a state of readiness: Great Britain (215 warheads), France (300), China (270), India (110-120), Pakistan (120-130), Israel (80), and North Korea (less than 10).

“Thus we have a total of 14,900 nuclear weapons which are maintained by a variety of governments in various states of readiness. These weapons are as much a part of your daily life as your morning cup of coffee.”

Aili swept her black arm toward the audience.

“The Arctic—that dark, cold, mysterious place about which we know so little—may well become the final battleground on planet Earth. Our greed for the profits from oil—despite the great challenges of global warming—may well trigger our final suicidal madness.”

She asked, with outrage in her voice, “Is that what you want?”

She asked, from deep in her heart, “Young people of the world, is that what you want?”

During a long silence, she let them answer, deep in their hearts.

Then she said, “These are the questions that we need to ask . . . before we go seeking for more petrodollars in the Arctic.”

The spotlight on her turned off, leaving darkness on the stage.

Chapter Nine

Aili Biriita walked across the lit stage to the front edge, wearing a flowing gown of the same vibrant green as birch leaves in May, when the leaves first open. She swept her arm in a rippling green sleeve toward the audience and told them, “Bring the sun and bring the wind into the classrooms of the world, and we shall have peace.”

Holding both arms out, she walked gracefully along the edge of the stage with her face lifted, as if to the sun. She spun around once, twice, three times, so that her sleeves and skirt fluttered.

Then she again swept her arm toward the audience as she addressed them. “I speak now especially to the young people in the audience, who soon will inherit the great challenges of the twenty-first century. And among those young people, I speak *especially* to the young women, for you shall be called upon to do a great job, an unprecedented job, a job which only you, I believe, are able to do.”

She paused. The young women, myself included, were waiting.

“You see, we can’t go on with the old ways any longer. The twentieth century was the cruelest, the bloodiest, the most barbaric century in all of human history. We killed each other by the millions, again and again, in war after war after war. We raced to build the next generation of weapons, and the next, and the next . . . and we sold all of those weapons, and we *used* all of those weapons, as if such a thing were perfectly normal.

“Now as the twenty-first century looks more and more like the twentieth, we glance at pictures of children dying in the rubble of Syria, we stare at pictures of children dead from poison gas . . . and we keep right on fighting our wars. As if all this butchery were perfectly normal.”

She paused.

“But these wars are *not normal*.

“Show me one woman who has brought life into the world . . . who hopes that her son will die as a soldier.

“Show me one woman who has brought life into the world . . . who hopes that her daughter will die as planes drop bombs on her home.

“Show me one woman who has brought life into the world . . . who hopes that her child will die as a refugee crossing the sea in a little boat on a winter’s night.

“Show me one woman who has brought life into the world . . . who does not treasure the gift, the *gift*, which she holds in her arms.

“Anyone who does not treasure this gift, anyone who would *kill* this gift . . . no, this is not normal.”

She paused, then she added with growing anger, “With the same ignorance and arrogance and belligerence with which we kill each other, we burn the coal and we burn the oil and thus we threaten to kill not only ourselves . . . but all of *life* upon this planet.”

She glared at the audience, then jolted them in their seats when she shouted, “Life!”

Silence, while they considered . . . being alive.

“The sun, which sends its light and its warmth across the cold, dark, empty reaches of space to this tiny ball of dust, so that life might live here . . . No, the sun does not wish to see that life destroyed.”

She swept her green arm toward the audience with the irrefutable argument, “The sun has brought life to us, for all the years that we have walked upon this Earth. Then let us bring the *sun* into the classrooms of the world, so that our children might harness its power . . . and live in peace.”

As she walked along the edge of the stage, she blew gently over the top of microphone. She took a breath and blew with more power. She took a breath and blew with even more power. Then she addressed the audience with the irrefutable argument, “The wind has filled our lungs and filled our sails for all the years that we have walked and sailed upon this Earth. Then let us bring the *wind* into the classrooms of the world, so that our children might harness its power . . . and live in peace.”

Aili walked to the center of the stage, reached her arm toward the screen and asked, “Would you like to talk about *jobs*?”

I clicked onto the screen a photograph of a woman standing on top of a wind turbine, wearing an orange work suit with reflective tape on the arms, legs and chest, a harness strapped over her shoulders and around her waist and legs—the harness was connected by a cable to the deck of the nacelle—brown work boots, a white helmet, and goggles. Behind her were a hundred wind turbines standing in rows in the sea, white against the blue of the water. The woman had a confident smile. The caption at the bottom read, “Best office in the world.”

The audience murmured with amusement, with approval.

“There is a difference,” said Aili Biriita, a Sami woman dressed in springtime green, “between a revolution and a renaissance. A revolution can of course be a political uprising, which in most cases becomes violent. A revolution can also be some great change in technology, such as the shift from fossil fuels to clean energy. Scientists and engineers work together to create new machines which are powered by completely new sources of energy. A single wind turbine can power a thousand homes. A wind farm such as the one in the picture, standing twenty kilometers out to sea, can power a small city. Solar farms in Africa can bring electricity to thousands of villages, transforming life for people who now have lights at night, clean stoves in their kitchens, machines that operate in small factories, and laptops for the kids in school.

“This is a revolution: a new and much better way of living. As clean energy replaces coal and oil during the course of the next thirty years, the pollution which produces global warming will be steadily reduced. Jobs will be created, hundreds of thousands and eventually millions of jobs, as people around the world go to work harnessing the sun and the wind. The currents in the sea. And the heat in the Earth.

“Schools around the world will be challenged by the need to educate a growing number of clean energy engineers, clean energy entrepreneurs, clean energy economists, and even clean energy lawyers.

“Economies will develop, as old shipyards such as Belfast, Ireland, where the *Titanic* was built, put people back to work building offshore wind turbines. Yes, economies will develop in Africa, where the sun will power everything from telephones to transcontinental railroads. Economies will develop in Asia, where solar-powered pumps will modernize irrigation. Economies will develop along coastlines around the world, where the sun and the wind will power desalinization plants, providing fresh water for kitchen faucets and for hydroponic tomatoes.”

I now clicked through a series of pictures—while Aili commented on each one—of modern wind turbines standing high above brightly colored patches of tulips and daffodils in the Netherlands, with an old-fashioned Dutch windmill standing low in the foreground. Of wind turbines scattered among rice paddies in Vietnam, where farmers still plowed the soggy earth with water buffaloes. Of a cross made of solar panels on the roof of an early Gothic church in Germany. Of a plane powered by the solar panels along its wings . . . as it flew across the Pacific Ocean on its journey around the world.

“Yes, this is a revolution, and a very good one. This is a revolution which gives us hope. I encourage you young people to consider a career which will enable you,

when you are eighty years old, to look back and say, ‘Yes, I helped to build a new and much better world.’”

I heard murmurs from the audience: here was good news, after so much day-to-day bad news in their lives.

“But,” said Aili Biriita, walking along the edge of the stage as she directly confronted her audience, face to face, “we can take our revolution up to a higher level. We can turn it into a renaissance. As a revolution is a new way of doing things—a new way of driving a car, a new way of powering a city, a new way of growing crops—a renaissance is a new way of *thinking*.

“Consider the difference between powering with oil and powering with the sun and the wind. In the first case, a company from one country may tap the oil of another country, with the aid of secret agents, suitcases filled with money, and even military force, if necessary. Weapons are traded for oil. Democratic governments are overthrown and replaced by reliable dictators. Profits flow into the oil company headquarters, while the Arab country, the Persian country, the African country, the Pacific country, the Central and South American country, sinks further and further into poverty, political unrest, and even civil war. That has been the story, repeated again and again, of the 20th century. Iraq and Iran are two prominent examples.”

I clicked onto the screen the fiery smoke of bombs above the buildings of Baghdad . . . and then angry mobs in the streets of Tehran.

“But what happens if, instead of fighting over oil, we *share* the sun and the wind. Of course we share them, because the sun and the wind belong to everyone. And we share them because their energy is so bountiful: their limitless energy is able, if properly harnessed, to power every village and town and city on planet Earth.

“By sharing—and here is the key—we *learn* to share . . . as a fundamental principle of life in the 21st century. Yes, companies can still earn a profit, workers will certainly be paid a good salary, but that will not be our primary reason for being in business.

“Our primary goal during the 21st century will be to share the blessings of the sun and the wind . . . so that finally, *finally*, we can live in peace.”

She paused.

“But how, you ask, do we make the transition from our present world of crisis after crisis . . . to this utopia, this dream, of prosperity and peace?”

“By doing something that humanity has never done before. By enabling young people around the world to become the first global generation in human history.

“And how do we do that?”

“By weaving our schools together. With the help of the sun and the wind.”

She paused, this teacher who took us step by step.

“Planetary problems require planetary solutions. So we are not going to call upon the politicians, who have bungled and blundered for decades. We are not going to call upon the military, who have waved their war clubs for centuries. Instead, we are going to call upon those bright, motivated young people who have an instinctive sense for what is right and what is wrong. We are going to team them up with each other, and with the sun and the wind.

“The young people of the world are about to inherit the enormous planetary mess which their predecessors have created, so they certainly have the right to try to clean up that mess in a way which makes sense to *them*.

“Thus we launch this renaissance—the Renaissance of the 21st century—by weaving our schools together, creating a global online classroom, with a global online library in a multitude of languages. Students in California who experience drought and wildfires . . . will communicate directly with students in Spain, in southern France, in Sweden, in Siberia, and in Indonesia, who also experience droughts and wildfires . . . so that they can learn from each other. And develop solutions which are innovative, mutually beneficial, and bold.

“We are going to enable every student around the world to be a part of this great enterprise. Students faced with coastal flooding in Bangladesh can work with students faced with coastal flooding in a dozen other regions around the world, so that *together* they can develop solutions. They share knowledge, they share technology, they share encouragement, and they share hope.

“Thus, *as they grow up together*, as they work with each other, as they share new ideas and new technologies, these vibrant young people become *the first global generation in human history*. They realize that what really counts is not the number of nukes in your arsenal and in my arsenal, but the efficiency of the international grid which brings electricity to every child in this world.

“By developing that grid, they will develop global prosperity, and growing democracy . . . and peace.

“This is the goal of the Renaissance of the 21st century: to learn to share, and to learn to build together, so that ultimately, we learn to live in peace.

“A new way of thinking. A new way of being. On a small round ball of dust, blessed with sunshine from a nearby star, where life—the miracle of *life*—is able to flourish.”

Aili swept her arm toward the audience. “Young women of the world, you were born to understand that life is precious, and fragile, and sacred.”

Half of the audience was listening with special attention.

“Men have muscles, which are good for today,

But women bring new life into the world,

Which is good for a thousand tomorrows.”

She paused.

“Women of the world, women of all ages and all cultures,

Bring your special vision into the global classroom,

And teach us what we have refused to learn for centuries.”

Aili Biriita walked along the front of the stage while we considered this bold new aspect of the Renaissance.

“And then, and *then*, we can go a step further.”

She pointed now at this person in the audience, and that person, and at *that* person, and then she swept her arm with its fluttering green sleeve at the entire audience as she asked them, “What are the hidden talents within our minds, within our hearts, waiting to blossom? Waiting to flourish? How long has humanity waited—through century after century of poverty and war—to become what it *could* become, if it only had the chance?

“How many heart surgeons died as children in the rubble of Syria? How many economists—how many visionaries—died as children during the bombing of Iraq? How many filmmakers died as children in the ashes of Yemen? How many teachers died as children in the droughts of Ethiopia, in the floods of the Philippines, in the madness of Kurdistan, in the massacres of the Yemini people? How much talent have we squandered from 1914 until today?”

Now she asked, almost pleading, “Do you see how much we have lost? Do you see how close we are to losing even more? Do you see that we now stand at a point in human history where we can either drill for oil in the Arctic while we hold a nuclear knife at each other’s throats . . . or we can make a decision, that yes, we have the ability to turn away from this madness. That yes, we have the intelligence and the talents and

the compassion to build a far better world. That yes, we as human creatures are here with a far greater purpose than to plunder and poison and kill each other.”

Now I clicked onto the screen a series of photographs of children in a war zone: children covered with dust and blood, children who lay on filthy hospital beds with faces swollen from a chlorine attack, children who were wrapped in white shrouds, held in the arms of women who shrieked toward heaven.

Children who stared at the camera with eyes that asked Why?

Then I clicked and the screen became dark.

After a long, long silence, Aili Biriita told her audience with a firm voice, “Clean energy will be the economic engine which powers your Renaissance in the 21st century. You will not need weapons sales. You will not need the profits of war. You will not need to grab someone else’s land. You will not need filthy coal, filthy oil. You will have the most efficient economic engine in human history, powered by endlessly abundant fuels.

“Harness the power of a star to your international grid, and you can transform today’s shabby wreckage into a flourishing global civilization.”

She swept her arm toward the audience, inviting them to join this unprecedented adventure.

“Let us reach deep inside of who we are . . . so that we can find the *best* of who we are. Let us find the seeds long dormant—seeds of a pioneering spirit, seeds of compassion, seeds of an ever-awakening love—then let us plant those seeds in the rich soil of the 21st century.”

With a look of disgust, she swept her arm as if clearing away the *worst* that was in us. “Those who would divide us, those who would teach us to hate each other, to fear each other, to seek advantage over each other, and ultimately, to take up arms against each other . . . they shall be regarded as fools.

“As they wither and die, their poison shall wither and die with them.”

Aili Biriita Gaup told us one more time, “Bring the sun and the wind into the classrooms of the world, and we shall have peace.”

The lights on the stage slowly dimmed as the figure in green walked toward the left wing and disappeared into darkness.

Chapter Ten

Aili Biriita walked proudly across the lit stage to the front edge, wearing once again her Sami *gakti*, a deep blue dress with broad bands of red at the cuffs and hem. She wore a red cap, and a red scarf over her shoulders with a silver brooch. From the belt at her waist hung a pouch made of reindeer hide. Over her dark leggings she wore bright red wrappings from her ankles to her calves. And—everyone in the audience noticed—she wore her reindeer-hide boots with their turned-up toes.

“Bures,” she said to the audience with a smile. “In Sami, ‘Bures’ means ‘Hello’.”

She paused, then she told them, “When a Sami greets you with ‘Bures’, you respond by saying, very simply, ‘Bures bures’. So I will say again to you—she swept her blue arm with a red cuff to her audience, ‘Bures!’”

Several voices, some shy, some hearty, called back, “Bures bures!”

She laughed, then she called back, “Buorre! Good!”

She walked along the edge of the stage.

“Or I might say in Russian, ‘Preevyet!’ That is the informal greeting, as if I were saying to a friend, ‘Hi.’”

She walked a little further along the edge of the stage.

“The Russians, as you well know, have been Norway’s neighbor for a long, long time. The Pomor people of northwest Russia traded with the Sami people along the northern coast of Norway as far back as during Viking times. Perhaps earlier, but we have no record. The Russians sailed small, one-masted boats, primarily from the port of Arkhangelsk, with a cargo of rye flour and some wheat. They traded with the Sami for fish, which they purchased as stockfish, dried in the cold wind off the sea. They also purchased fresh fish, which they salted themselves on board their boats.

“The Russians needed fish, because their church allowed them to eat only fish and vegetables on Fridays. And the Sami needed grains, because their growing season was so short. Thus these two peoples benefited through their cooperation . . . for centuries.

“They traded other things, of course, in addition to grain and fish. The Russians brought oatmeal, peas, and salt. They brought iron, timber and tar, as well as rope and canvas, for boatbuilding. For the Sami women, they brought cooking pots and soap, porcelain bowls and candles, and of course, beautiful Russian wood carvings.”

Aili now paused, shaking her head with disapproval at her audience. “I am sorry to say that this harmonious trade was interrupted again and again by our European neighbors from the south. In 1316, King Haakon V of Norway prohibited foreigners from trading in North Norway, which was certainly a snub to the Russians. Over the years, the Hanseatic League based in Bergen got involved, as did the archbishop in Trondheim. King Christian VII, way down in Copenhagen, chartered three ports on the coast of North Norway—Vardø, Hammerfest, and Tromsø—with status as towns, in order to regulate the Pomor trade. To regulate meant, of course, to collect taxes. Right from the very beginning, our neighbors from the south wanted to get their fingers into the pie.”

Aili said with a wry smile to her Oslo audience, “Ándagassii. Sorry.”

She continued, “The situation improved in 1809, when the United Kingdom established a trade embargo against Denmark and her colony Norway. You have of course read Ibsen’s great poem about Terje Vigen, who was captured by the British for attempting, in his little rowboat, to break that embargo. In order to reduce famine in North Norway, the government in Copenhagen issued a decree which legalized trade between the fishermen of the north and the Russian traders from Arkhangelsk. Russian rye and wheat kept the people of North Norway alive while the Europeans fought their wars to the south.”

Aili paused, then she said, “Balshoyeh spaseebah. That is Russian for, ‘Thank you very much.’”

She walked a little further along the edge of the stage.

“After the Europeans had dealt with Napoleon, and little Norway was passed from Denmark to Sweden, the Pomor trade with Russia grew steadily. Most of the trade restrictions were lifted in 1870, which included extending the period of trade from one summer month to the period from June 15 to September 30, when the White Sea north of Arkhangelsk was ice-free. Finally, trade could flourish. In 1870, roughly 400 Pomor vessels sailed along the northern coast of Norway, all the way to Tromsø, manned by a crew of over two thousand Russians, bringing rye flour which they traded for haddock and halibut and cod.

“Beginning in 1875, the Russians ran a regular steamboat service between Arkhangelsk and Vardø. Norwegian tourists traveled to Russia, and Russian workers travelled to Finnmark. Trade by steamboat flourished, and, I can tell you, the Russian traders were highly respected because they were . . . trustworthy.”

Aili studied her audience, looking from face to face.

Then she sighed, a sad, deep sigh into her microphone.

“But of course, the Europeans had to have another war. During World War One, the Russians changed their export regulations, and shipping from Arkhangelsk was hindered by the fear of German submarine attacks. Then came the Russian Revolution of 1917 . . . and trade stopped completely. Lenin closed the sea border to ships, and the land border to reindeer migrations. A few Russian boats still made their way to the port towns of North Norway, but Stalin stopped them in his brutal manner in 1929.”

She said softly, “Do svedaneeya. Good bye, to our friends in Russia.”

She walked further along the edge of the stage.

“But of course, of course, of course, another war came along. World War Two, when Norway was occupied by the Germans. During the last winter of the war, 1944-1945, when Germany pulled its troops out of Norway for the final defense of the homeland, the Germans burnt almost every building in Finnmark to the ground. They set dynamite charges on all the telegraph poles, leaving thousands of stumps standing above the tundra. During that winter, Norwegians in some areas were living in caves. Their children were shipped south on fishing vessels.”

Aili swept her arm to her audience, “You know this history, because for some of you, it is living memory. And so you know what happened next. The Red Army, the Soviet Army, based in Murmansk, came sweeping over our border . . . not to conquer us, but to bring tents and clothing and food and doctors. Yes, the Russians enabled the Norwegians to survive through that last winter of the war.

“And then . . . they went home.

“Balshoyeh spaceebah. Thank you very much.”

Aili looked from face to face in the audience, wondering—and asking them to wonder as well—when the last time was that any of them had said “Thank you” to Russia.

“You may not know, unless you are a Lofoten fisherman, that during the Cold War, when we all rattled our nuclear sabers at each other, Russian fishermen and Norwegian fishermen took care of their codfish. The codfish spawn from February to April in the waters off the Lofoten Islands. Then the tiny hatchlings ride the Gulf Stream north, along the coast of Norway, and northwest, above the top of Norway, to the Barents Sea north of Russia. The cod grow up in Russian waters, feeding on our old friends in the Arctic food chain. When they reach maturity, they swim during the dark months of January and February *against* the Gulf Stream—or as it is called, the

North Atlantic Drift—over the top of Norway and down to the Lofoten Islands, where they spawn in waters with a perfect temperature and perfect salinity.

“The cod are thus an international fish, both Russian and Norwegian. And so both the Russian fishermen *and* the Norwegian fishermen, working together, protected the cod population from overfishing. During the entire Cold War—during the mad competition to build more and more nuclear weapons, during the Wall in Berlin, during the Cuban Missile Crisis, during America’s war in Vietnam and the Soviet war in Afghanistan—Russian fishermen and Norwegian fishermen set codfish quotas, and abided by those quotas. Russian researchers and Norwegian researchers sailed on each other’s ships, studying fish populations, water temperatures, and the features of the Arctic ice. They held conferences together and they shared their research. I imagine that they drank a little vodka and played a bit of chess. They sang for each other the old songs from the Lofoten, and the old songs from Arkhangelsk. And they found each other . . . trustworthy.

“Today in the northwest Atlantic, the cod population has been overfished to commercial extinction by the American and Canadian fishermen. But today in the northeast Atlantic, the cod population is flourishing.

“**Balshoyeh spaseebah.**”

She paused, to let the Norwegians who love their cod . . . remember that those cod grew up in the Russian waters of the Barents Sea.

“One more small chapter in this tale of two nations who have been good neighbors for a long, long time.

“In the autumn of 1991, shortly after the city of Leningrad had renamed itself as Saint Petersburg, the Bodø Graduate School of Business, a young business school above the Arctic Circle, received funding from the Norwegian government in Oslo to send a delegation of business teachers to Saint Petersburg, where they would visit several universities . . . and choose one with which to develop an exchange program.

“A dozen teachers of Western capitalism spent a week visiting various universities, and decided, based on mutual enthusiasm, to develop a program with Baltic State Technical University, which still had multiple copies of **Das Kapital** by Karl Marx in its library. Baltic State Technical University had been an important institution in the development of the Soviet space program. But it had absolutely no experience in training students to do business with private companies in the West.

“Initially, teachers from Bodø traveled to Saint Petersburg, and to universities in Murmansk and Arkhangelsk, on short teaching visits. They took cartons of books

with them, and developed warm friendships with their Russian colleagues. Eventually, Russian students in growing numbers spent two years at the Bodø Graduate School of Business, earning a master's degree. The many graduates of this unprecedented program now work with international companies in Russia, as well as with companies throughout Europe.

“Thus the program started from scratch by a group of teachers in Bodø, and warmly received in three Russian cities, has proven to be an enormous success. Peter the Great, who founded Saint Petersburg in 1703 as Russia's open door to the West, would be enormously proud of what the Russians and the Norwegians together have accomplished.”

Aili now walked to the very back of the stage, where she stood facing the audience . . . but was remote from it. She had come to a barrier . . . beyond which she could progress no further.

Finally she walked back to the edge of the stage. She stared at the audience as if she could not understand them.

“So now, after centuries of friendship, you are going to risk everything . . . so that you can earn a little more money from your filthy oil.

“And worse, as a member of NATO, you take your marching orders from the Commander in Chief of NATO, who has never for a moment tried to understand the Russians and their history. The President of the United States of America, elected in 2016 by sixty-three million of his countrymen, has given orders to build up America's nuclear arsenal. He has given orders to pull out of the Paris Climate Agreement. He has created, month after month, utter chaos in the White House.

“Why, please explain to me, should Norway allow this bloated buffoon to determine your foreign policy? When his term of office expires, hire a taxidermist to stuff him and put him into a glass case in a museum, with a plaque that reads, “Here is the *worst* of who we were.”

She shook her head, baffled.

“What would your beloved Nansen say, were he to return to the world today? Nansen, who sailed the *Fram* along the northern coast of Russia during the summer of 1893, and who picked a bouquet of Russian wildflowers which he posted home to Eva, before he set his course to the north, toward the Arctic ice cap.

“What would Nansen say, were he to learn that today, half the ice cap is *gone*?

“What would Nansen say, were he to learn that Norway, for almost half a century, has sold millions upon millions of barrels of oil . . . oil which has been

burned, thus adding to the pollution in our atmosphere, and to the pollution in our oceans? Yes, what would Nansen say were he to learn that Norway now plans to drill for *more oil* in the Arctic?

“He would look you square in the eye with absolute outrage.

“He would be appalled at the smallness of your minds.

“And then he would tell you—once he had calmed down enough to even *speak* to you—that as you have done with the codfish, as you have done during times of famine, during times of war, you must *work together* with Russia . . . and not with some mindless brat who will only lead you into World War Three, and then abandon you.

“Norway and Russia must work together to save the Arctic. First, we need a pledge that there shall be no drilling for oil, or even testing for deposits of oil. Second, we need a pledge that the Arctic shall be a nuclear-free zone, as is the case already in other parts of the world. Including Norway. Third, Norway and Russia shall invite the other Arctic nations—including the indigenous peoples of those Arctic nations—to develop a plan for building a clean energy grid around the top of the world, a grid powered by the winds off the northern seas, which will provide 100% clean energy to the samovars of Russia and to the tea kettles of Canada, by the year 2030.

“The Russians are brilliant engineers. Look at their space program. Even as the Soviet Union crumbled, the Russians designed first the Mir space station, and then they helped to build the International Space Station. Russian and American cosmonauts and astronauts, and astronauts from a multitude of other nations, have been working together, very peacefully and very successfully, for *decades*.

“Norway, with your modern clean energy technology, *team up* with those Russian engineers . . . and show the nations who signed the Paris Climate Agreement how the job is really done. Japan, at the far end of Russia, will join your team. China will join your team. India will join your team. Morocco will join your team. Brazil and Mexico and Costa Rica will join your team. Scotland and Ireland and England will join your team.

“If the Americans vote for Bernie Sanders in 2020, they will join your team. If the Americans vote for another Reptile, then never mind. The rest of us will be well on our way to building a global grid which will be one of the masterpieces of the Renaissance of the 21st century.”

Aili walked along the edge of the stage, before she added one more note about Russia.

“During the recent Easter vacation, just a few weeks ago, I visited Arkhangelsk. First I attended a conference with Russian Samis in Murmansk—an excellent meeting with our long separated fellow Sami—and then I traveled on, purely out of curiosity, to the Russian seaport which had been so important to the Pomor trade.

“And do you know what I discovered in Arkhangelsk? There is an outdoor museum just outside the city, a museum called Malie Kareli—much like Maihaugen in Lillehammer, or the Norwegian Museum of Cultural History on Bygdøy—with old wooden farm buildings, and wooden churches. Yes, and do you know what else? Suddenly I spotted three old wooden windmills, which Russian farmers had used, centuries ago, to grind their grain. Windmills! Now if those old windmills, built with logs and axes, could spin in the Russian wind, then surely a wind farm with modern steel turbines, catching the winds off the White Sea, could power the entire city of Arkhangelsk.”

I clicked onto the screen a picture which Aili herself had taken, of an absolutely genuine old Russian windmill, looking very much like an old Dutch windmill.

She laughed with delight.

I clicked onto the screen an old wooden church, an old wooden barn, and old wooden bell tower, and then, once again, the old wooden windmill, waiting . . . for modern steel turbines to join it on the hilly plains of northern Russia.

Someone in the audience started clapping. Several others joined with a burst of applause.

Aili Biriita now stood at the center of the stage, looking with appreciation at her audience.

“No teacher could ask for better students than you have been today. I am deeply grateful.” She held her hands over her heart and bowed to them.

“You will perhaps be glad to know . . . that this long lecture is almost done. We are in the home stretch.

“I would like to leave you with a vision of what we *could* do, if we would only do it.”

She paused. Her listeners were not restless. They were with her. They were ready.

“Nearly a thousand years ago, when people lived in small wooden houses with a roof of thatch, a small group of visionaries decided that they would build something new, something that would stand tall and beautiful and even magnificent above every other building in the land. This new edifice would be built of stone, so that it could endure through future centuries.

“It would have walls so tall that they must be supported with flying buttresses. It would have windows high on the walls, windows filled with pictures made from pieces of colored glass. These windows were not designed so that people could look out at their shabby world. These were windows through which the sun itself would shine, brightening the pictures, and casting their colors on the pilgrims who sat in the pews of this great church.

“This edifice, called a cathedral, would reach with towers, and with a spire, toward the lower edge of heaven. The towers would contain bells which would send their beckoning call across the land, inviting the people who worked the soil and lived in their huts . . . to come as pilgrims to this great house.

“Here in this house, it was hoped, people would grow into something beyond their daily selves. Their hearts would awaken, their minds would search, their spirits would be nurtured.”

She paused.

“Those who first designed the cathedrals; those who drove the first stakes into the land, outlining a great cross; those who cut and laid the first stones . . . they knew that they would *not* see in their lifetimes the spire which would cap their edifice. One generation laid the groundwork and started the walls. The next generation built the towering walls with large, empty window frames. The next generation built the nave and the aisles, the gallery and the triforium, the clerestory, the flying buttresses, and the ribbed vaulting. The next generation built the pinnacles and the gargoyles, the towers and the spire. They filled the windows with colored glass. And they installed the bells.”

She looked at her audience, face by face.

“In the same way, over the course of several generations, we must build the cathedrals of the 21st century. Not, perhaps, in the shape of a cross. We shall build cathedrals with innovative architecture, reflecting the cultures of the world, the biospheres of the world, and the dreams and the visions of the world.

“We shall build these cathedrals with a belief in ourselves, and with a reverence and a respect for the *life* on this planet. We shall begin a work which we ourselves will not see finished. We shall build a gift, for those who will come after us.

“And every child who walks upon this Earth, every child who lifts her face to the warming light of the sun, every child who flies his kite in the laughing breath of the wind, every child who swims in the playful waves of the sea . . . Yes, every child shall be welcome in *every* cathedral in every country on this planet. For the cathedrals shall be built to honor the children of this world. To honor all *life* in this world.

“Yes, let us build the cathedrals of the 21st century, sanctuaries where our hearts can awaken, our minds can search, and our spirits can be nurtured.

“Let the great pipe organs in those cathedrals rumble and thunder with joy, with celebration. Let them speak with the music of gratitude. Let them shimmer with the music of mystery. Let them climb to crescendos of encouragement. Let them bless us with the balm of hope. Let them weave in our hearts the lasting tapestries of peace.”

Aili paused to let her audience savor this vision.

Then she made her final request.

“Good people, when you leave this meeting hall today, close behind you the door to the old, and open the door, a dozen doors, to the new.

“And neighbor shall reach out to neighbor.

“And nation shall reach out to nation.

“So that together we can lift our faces to the benevolent sun, and to the boisterous wind, and to the bountiful seas.

“So that together we can work to heal the wounded Arctic, and cap again the planet with the great curving sheet of ice which has kept our world comfortably cool . . . since the very beginning of our long human journey.”

She paused.

“Yes, let us honor the Creator . . . by honoring the creation.”

With her hands over her heart, she bowed.

“Ollu giitu. Thank you very much.”

Then she walked with dignity across the stage . . . until she disappeared, passing the torch to those who would listen.

Part III

Wearing a White Cap

Chapter Eleven

One might have thought that graduating from high school would be exciting. It was all right. I was deeply grateful to my teachers, and I thanked each one. But I was very ready to move on.

One might have thought beginning law school in August would be the next step, and that I would spend the summer feeling both excited and nervous.

But the summer itself became something so extraordinary that I did not have time to feel nervous about starting law school. Because, you see, we had an enormous job to do during that summer, before classes began. First, working with a professional team, we had to edit the film of Aili Biriita's presentation, with subtitles in thirty-eight languages (to begin with). Second, again with a team of colleagues, we had to send the film electronically to well over a thousand recipients around the world. Production, and then marketing. All of this had to be completed before classes began at the Law School for both Aili Biriita in her fourth year, and me in my first.

Aili's presentation had been filmed, at her request, by a professional Sami filmmaker and his assistant. The three of them met every day during the early weeks of the summer at an editing studio in Oslo, weaving together shots of Aili speaking, with shots of the audience listening. They made sure that the audio was consistently clear, including the footsteps of Doom along the edge of the stage.

My job was to meet every day with a team of translators in the classroom at the Norwegian Center for Human Rights—the classroom was otherwise rarely used during the summer months—directing their efforts as they rendered the printed text of Aili's presentation in Norwegian into English, Sami (variations used in Norway, Sweden, Finland, and Russia), French, German, Spanish, Italian, Portuguese, Greek, Hungarian, Bosnian, Croatian, Serbian, Russian, Arabic, Urdu, Farsi (the three languages in the Lighthouse Camp), Kurdish, Hebrew, Mandarin Chinese, Vietnamese, Japanese, Thai, Burmese, Hindi, Bengali, Nepalese, Tibetan, Inuit (four variations used in Alaska, Canada, and Greenland), Maya, Australian Aboriginal, Oneida (the language of the tribe in New York State), and Lakota Sioux (the language of the people of Standing Rock, in both North and South Dakota).

Some of the translations were done online, especially with the indigenous languages. We sent Aili's transcript to the Maya in Guatemala, to the Inuit in Greenland, to the Sioux on the Rosebud Reservation, to the Aborigine in Australia,

where people rose to the occasion and wrote (or skyped) back and forth with us, often speaking in English with Aili herself . . . until, with great pride, they sent their completed translation, in their ancient language, to the film-makers in Oslo.

As the summer progressed and people heard about our project, additional translators showed up to offer their skills. The classroom into which I had glanced so longingly on my first visit to the Center was filled every day that summer with forty or more people—most of them immigrants—working at their laptops, rendering Aili’s algae, and nuclear weapons, and her call to bring the sun and the wind into the classrooms of the world, into Urdu, and Inuit, and Russian, and Mayan, and Nepalese.

By the end of July, they were describing Aili’s cathedral, as generation after generation built the great edifice. With their multitude of languages and religions, the industrious immigrants translated with great skill, “Let us honor the Creator by honoring the creation.”

My job was to walk from translator to translator, helping them to understand not only the meaning of Aili’s words and phrases, but the shades of meaning, and the tone of her language. How to render the biological terms, the military terms? With both printed dictionaries and online dictionaries, the translators would search until they found *precisely* the right word, the right phrase.

Sometimes Urdu would consult with Farsi. Sometimes Bosnian would consult with Croatian and Serbian. Sometimes French would check with Spanish or Italian.

I don’t know whether any other document has ever been translated into so many different languages in such a short time . . . with so much passion.

We had coffee together, lunch together, and, when Aili would arrive during the afternoon following her work editing the film, lively discussions together as the translators asked her about particularly difficult phrases. How to say that in Russian? How to say that in Tibetan?

The diminished staff at the Center—most of them had left on vacation, especially in July—greatly enjoyed this unprecedented international activity in their classroom. Sometimes Berit would stand at the door with a quiet smile as she marveled at the intensity of our collaboration. We were like musicians in a symphony orchestra, working on our individual scores—for flute, for cello, for trombone, for timpani—in preparation for the concert, when *everyone’s* voice would reach out to the world.

We did something else that summer which remains a treasure in my memory. Every week, on a sunny Saturday or Sunday, everyone working on the film met at Sognsvann, a lake in the forest northwest of Oslo, at the end of the Metro line, for swimming, music, and a Grand International Picnic. We brought family and friends, all of whom wanted to meet this extraordinary group of film-makers.

The lake is an oval of sparkling blue-black water, about a kilometer long and half a kilometer wide, wrapped by a forest of spruce, maple and birch. A path for hiking and jogging follows the shore all the way around the lake. No motor vehicles are allowed, in the forest or on the lake. (A parking lot, hidden by trees, and the Metro stop, a simple platform, are connected to the lake by short paths.) A little kiosk, run by a Vietnamese family, offers coffee, hot cocoa and waffles.

Along the southern shore, a sandy beach leads into shallow water, perfect for babies and small children. Toward the northeast corner of the lake, two piers reach out from shore to where the water is several meters deep, perfect for swimming.

Picnic tables are sprinkled along the shore; fire pits are available; barrels contain sorted trash; the toilets are state-of-the-art modern, and wheelchair-accessible.

Everyone in Oslo, whether native-born or immigrant, feels welcome at Sognsvann. Here, after a long hot week in the city, they can plunge into the cool water that embraces them and renews them and makes the world right again.

So to Sognsvann we came with our families and our friends, bringing baskets of food and musical instruments from a multitude of cultures. We met each other's families, babies and grandmothers included. My mother came to all of the picnics, my little brother Marius came to two, and my father came to one. (Strange father, who had a wife and children because that was the thing to do, that was *normal*, though he could just as easily have had a cot and a television in his office.)

Aili's family lived far to the north, in Kautokeino—or as the Sami called their town on the tundra, Guovdageaidnu—but her Sami friends in Oslo joined us at Sognsvann with their reindeer stew, their boisterous energy, and, when the mood was right, their extraordinary singing. The Sami *yoik* is more than just a song; the singer describes a subject such as a friend or a mountain, or a lake in the forest, with a voice that paints a portrait with sounds. The Sami *yoik* to their reindeer as they migrate across the vast expanse of the tundra, with voices as haunting and beautiful as the shimmering northern lights. Now they yoiked to the sparkling waters of Sognsvann. And they joiked to their new friends, who listened with admiration and gratitude.

On the second of those festive picnics—when people were acquainted with each other from the *first* picnic, and were glad to see each other again on the second—our translator from Russia surprised us with a gift. After everyone had been swimming, and while we were opening our baskets and setting culinary delights from Nepal and Syria and Portugal and Thailand on the picnic tables, Liudmila, a young woman from Arkhangelsk (and a student in mathematics at the University of Oslo), opened a large canvas bag and took out a handful of . . . white circles made of knitted yarn.

She set them on a picnic table, then took one of them and put it on her head. It was a simple dome-shaped cap, looking much like a Hebrew *kippah*, or an Islam *taqiyah*, or the Pope's white *zucchetto*.

"I know," said Liudmila, "that usually a *man* wears such a hat. I mean no disrespect, as a woman, by wearing this cap, because I wear it with an entirely different purpose."

She paused, searching the faces around her, wary of religious criticism.

"This thin white dome represents the Arctic ice cap. The real ice cap is far away in the north. I am probably right that none of us has actually seen the Arctic ice cap?"

Again she paused, searching the faces around her. People shook their heads; no, no one here, not even Aili, had actually seen the Arctic ice cap.

"So I thought that, while we do our work this summer, we might, as a team, put that ice cap right on top of our heads, so that we really *think* about it."

She smiled, hesitant, waiting for their reaction.

Someone in the back of the group, a young man from Syria, began to clap. He grinned as he asked Liudmila, "May I have one of your ice caps to place on my head?"

Liudmila sorted through the caps on the picnic table, choose one that was a man's size, then passed it back through the group to the translator from Syria, who very definitely had never seen the Arctic ice cap. Adnan put on his cap, adjusted it slightly—it was a perfect fit—then he held up his hands and shook them as he turned in a circle, showing off his Arctic ice cap. He laughed, "My brain is getting coooold!"

No one protested. No one stomped off angry. They smiled and clapped and laughed as Liudmila, reaching again and again into her large canvas bag, passed out the caps of white ice to her fellow translators, to the professors from the Center, to the staff (including me) who kept everyone organized, and now to Aili, who wore her white cap with such dignity that it was more than a cap: it was a crown.

Liudmila, reaching the bottom of her bag, apologized, “I have only a couple more. I was knitting as fast as I could, but . . . I’ll bring another bunch to our next picnic. If you like, I can make a few small ones for the babies.”

Murmurs of approval made it clear that everyone would like a cap, even the Muslim grandmothers who would wear it over their head scarves.

Then Liudmila did something which I will never forget. Holding the last white cap in her hands, she turned to my mother and said, “Sofia Alexandra.” She paused, looking for a long moment at my mother, who was surprised by this unexpected attention.

Liudmila continued, “I want to tell you that your daughter, Anna Katerina” (she spoke our names as a Russian would speak them), “has told me about your trip to Lesvos, where you helped people who were fleeing from a war.”

My mother nodded, then said shyly, “Yes. That is true.”

“If I understand correctly, it is because of you that your daughter is now the Director of Translators, working so hard . . . so that we all do our best.”

I had never before been called the Director of Translators. Now it was my turn to be surprised.

My mother looked at me with a proud smile. “Yes, Anna gets up every morning at six, to be on the train at seven-fifty.” She laughed. “It’s quite astonishing.”

“So,” said Liudmila, “this white cap is from all of us. We want to thank you.”

She gave the white cap to my mother, who, as the crowd applauded, put it on over her (slightly gray) hair, with a look of pride and deep gratitude.

She glanced at me with a smile, and though I hated selfies, I did stand beside her, each of us wearing our white cap, and asked if someone would take our picture.

Then fifty people wearing white caps, joined by more than fifty people who hopefully would be wearing a white cap at the *next* picnic, sat down to our festive meal. I noticed that people walking by, people jogging by, people pushing baby buggies . . . looked with curiosity at this group of picnickers with their strange white caps. They did not know that while we were sharing a dozen different dishes of rice, a dozen different types of bread, we were also, very quietly, almost secretly, working together to change the future of planet Earth.

Chapter Twelve

While we were working on the film's production—our final product would be a YouTube, easy to send on the internet—we were thinking as well about marketing. To whom would we send this non-commercial film which did not fit into any marketing niche? And what sort of letter would we write to accompany the film, introducing it, and explaining the follow-up action which the recipient groups might consider? In other words, when a film appears as a YouTube in somebody's email in Bulgaria, or Saint Petersburg, or Colorado, or Singapore, mailed by some never-heard-of-them group in Oslo, Norway, how do we get people to actually *look* at the film . . . and then join our campaign against drilling for oil in the Arctic?

"Send the letter out to the women of the world," said Aili, with absolute faith that the women would understand a letter which told them, "Things in the world are so bad, that only women around the world can set them right."

"A woman knows when her child is sick. A woman knows when her own mother is sick. A woman knows that you do not wait and wait for your child to get well, especially if the child has a fever that is getting *worse*. And if the husband will not take the child to a doctor, then *she* will, of course.

"The same is true when Mother Earth has a fever. Women understand that we cannot wait any longer."

We gathered a marketing team, many of them students during their summer vacation who worked with their laptops in a separate conference room at the Center. Following leads from the translators, and pursuing research of their own, they compiled a growing list of women's groups, labor organizations, and churches. International Women's Day, which had stunned the world with such a huge turnout in March of 2018, and then again in 2019, had a very professional network of member groups in countries around the world.

A Sami on the marketing team named Máhtte Biera (a cardiology student at the Faculty of Medicine), compiled a list of indigenous groups around the world. He emailed to his network of Sami friends—academics and researchers—who had traveled to indigenous conferences in North America, in Latin America, in Russia, in northern Africa, and even in Hawaii, and thus he built up a list of contacts to whom we could write.

Máhtte wrote as well to the Permanent Forum on Indigenous Issues at the United Nations in New York, which responded with a list of the most politically active

indigenous groups around the world (a list that included, he was delighted to note, the Sami of Norway).

Our marketers compiled lists of environmental organizations, both international and local. We targeted groups which monitored the shrinking of glaciers in Norway, Switzerland, and the Himalayas (in Tibet, Nepal, India, Bhutan, China, and Pakistan). We added groups which monitored the glaciers in the Rocky Mountains of North America, and in the Andes Mountains of Peru. The shrinking of the Arctic ice cap was directly linked to the shrinking of the world's glaciers, so of course the folks in Tibet and Pakistan and Peru would be interested in our film.

We compiled lists of Environmental Studies programs at universities around the world. That research led to a list of environmental youth groups around the world. A growing number of young people were suing their governments; they demanded stricter emission controls, and greater investments into clean energy. Surely those young people would be interested in a film about drilling for oil and the consequent destruction of the Arctic ice cap.

We compiled a list of Departments of Agriculture at over a hundred universities, because as the ice cap melted, and as the jet stream weakened and wobbled, farmers around the world were going to suffer from worsening drought.

And Neighbor Shall Reach Out to Neighbor—the title of Aili's film—kindled a spirit of enormous energy and determination. Every day at our headquarters in the Center, someone thought of a new group of recipients—politically active churches, whale watchers, cod fishermen, the timber industry in Canada, in Russia—who would be, or *should* be, interested in our film. We even added a list of Green Grandparents, who were concerned about the world which their grandchildren would inherit.

But that was only half the job: lists of names and addresses. Now what about the letter which would introduce the film . . . and include a plan of action?

The Center hummed with discussion about what we hoped that people would do, around the world, once they had seen the film. Would they just shrug and wonder why on earth they should care about algae growing on the underside of Arctic ice? Would they dismiss talk about nuclear weapons as pointless hysteria? Would they shake their heads with a weary sigh, "Yes, yes, it's all true, but what can I *do* about it?"

We put together a list of suggestions. First, we would supplement the film with an ongoing program of education. We would release the film in mid-August, just before classes resumed at the University. Beginning in September, we would start a

blog which would monitor the activities of oil companies in the Arctic. Anyone with access to reliable information could contribute to the blog. We would also monitor, as much as possible, the activities of military vessels in the Arctic. We would monitor the shrinking of the ice cap, the temperatures of the ocean and the atmosphere, the melting of the ice cap on Greenland, and the size and frequency of Arctic storms. We would monitor the living conditions for the polar bears, the walruses, the seals, the whales, the cod, the krill, and the Arctic terns.

Yes, we would shine a spotlight on the Arctic, so that people could keep an eye on that important part of the world.

Our efforts in education would go much further, for we would set up an online registry of schools—some in the Arctic, some further south—so that high school and university students could share their research, their pictures and their thoughts with other students all around the top of the planet. With a weaving of schools, with a sharing of weather reports, with kids in Canada skyping with kids in Russia, the young people could build their own network. Indigenous kids could explain their historical perspective, and their cultural perspective, to people of their own generation. Let them *together* study the changes in the Arctic, so that together they could develop a voice which would speak to the rest of the world during the decades of the 21st century.

We would suggest, in our letter that accompanied the film, that the women of Europe begin a correspondence with the women of Russia, their neighbors. In 1812, and then again in 1941, the men of Europe had marched to the gates of Leningrad, of Moscow, of Stalingrad. Today, NATO missiles created during the Cold War waited in their launchers and silos on the western side of the border for someone to give the order, while Russian missiles created during the Cold War waited in their launchers and silos on the eastern side of the border for someone to give the order. Perhaps the time had come for a different approach.

Both sides had experienced, within living memory, invasion and occupation. Both sides laid flowers on graves in a multitude of cemeteries. Both sides had the same hope, the same determination, deep in their hearts: Never again.

Let the women of Norway, who remembered that Soviet troops kept the people of Finnmark alive during the last winter of the war; let the women of France, the country which historically had welcomed so many refugees from Russia; let the women of Finland, the country in Europe which best understood the Russian people;

let the women of Ireland, who had never had any quarrel with Russia . . . yes, let the women of Europe begin a correspondence with the women of Russia. Liudmila, our translator from Arkhangelsk, assured us again and again that Russian women and European women would discover that they had much more in common . . . than the politicians and the media would have us believe.

Let the women build their own network, let them share their historical perspectives, their cultural perspectives, so that *together* they could develop a voice which would speak to the rest of the world during the decades of the 21st century.

Well, we could only suggest. Maybe the women of Greece, or Portugal, or Scotland, would reach out to the women of Iran. To the women of Afghanistan. To the women of Yemen. To the Yazidi women of northern Iraq, captured by ISIS and held in hideous bondage. Maybe, with a weaving together of the women of the world, a voice would emerge which would speak with a deeper wisdom, a bolder vision . . . during the decades of the 21st century.

Beyond that . . . let different peoples from different cultures develop their own responses to our film. Let them look at the impending catastrophes in the Arctic with their own eyes, and respond in ways that felt right for them. Perhaps one country would rise up and take the lead.

We would soon reach a tipping point. Either a tipping point on planet Earth, when the thawing permafrost released methane on a planetary scale, wrapping a final, fatal blanket around the world. Or a tipping point among the peoples of planet Earth, when enough of them finally put a stop to the oil, put a stop to the wars, and began to move in an entirely different direction.

Our job was to make sure that the second tipping point happened before the first tipping point. That was the purpose of **And Neighbor Shall Reach Out to Neighbor**.

* * * * *

Those three intensive months, from mid-May to mid-August, 2019, were the most exciting and positive period of my young life.

It was not just creation of the film, an achievement in itself, with its forty-three different subtitles, that was so exhilarating. It was also the creation of our team, “The Wearers of the White Cap”. I never knew, certainly not as a bored high

school girl, that I had so much friendship inside me, waiting to reach out. Nor had I ever experienced—though we worked on a film about the threat of unprecedented catastrophes—such high spirits while working with a group of vibrant colleagues.

Whether or not our excitement, our determination, would transcend beyond ourselves, we did not know. Perhaps the peoples of the world would shrug and continue with their madness. More oil, more wars, until Mother Earth herself developed a fever so severe that—as is the purpose of all fevers—it killed off the invasive infection, us.

Chapter Thirteen

And so it came to pass that on Saturday, August 10, our unprecedented film, **And Neighbor Shall Reach Out to Neighbor**, had its world premiere. Once again the largest auditorium at the University of Oslo was packed. The translators and the marketers were there, with their families, all wearing their white caps. The editors at the film studio were also there, wearing their white caps. My mother was there, wearing her white cap. She had brought along my father and brother, who, unfortunately, were not wearing white caps.

The Norwegian Center for Human Rights, proud of this unprecedented initiative which had flourished for three months under their wing, had invited a large number of guests. Berit, who wore her white cap, had alerted the major media outlets to send not only their film critics, but their top political journalists, because, as she told them, “you’re going to get the scoop of the century.”

Twice as many Sami as before, dressed in their brightly colored *gákti*, were sprinkled throughout the audience. While people entered the auditorium and found their seats, we were treated to something special, because the Sami—first one woman who stood in one corner of the auditorium, and then a man who answered her from the opposite corner of the auditorium, and then a growing number of Sami who stood in front of their seats within the audience—filled the large room with their strong, beautiful, haunting *yoik*. The music which could reach across the tundra now filled the enormous hall, so that the audience was not just listening to the music, but was immersed in the sound of voices who called back and forth to each other, sometimes solo, sometime as a group, sometimes all together, as the northern lights will glow and shimmer and ripple across the sky on a cold Arctic night.

And then, as the last Sami voice became silent, and the lights dimmed in the auditorium, Aili Biriita walked out on the stage in a spotlight, wearing her blue and red *gákti*. She wore as well her Arctic ice cap. Smiling, she surveyed the audience and welcomed them with a hearty, “Bures!”

The Sami in the audience, as well as the Wearers of the White Caps, returned her greeting with a hearty, “Bures, bures!”

She swept her blue arm with a red cuff, “Welcome to the world premiere of **And Neighbor Shall Reach Out to Neighbor**, a film which has been created through the tireless work of those people in the audience wearing their white caps.”

She paused, then she gestured with her hands, “Would the Wearers of the White Caps please stand.”

We all stood up while the audience applauded.

“What they are wearing,” Aili explained, “is a replica of a dome-shaped sheet of ice, the Arctic ice cap. This cap helps to focus their thinking. Because, as you will hear me say in the film, “The most important event in your life today . . . is the melting of the Arctic ice cap.””

She gestured; we sat down.

“I will not say much more. Let the film speak for itself. I will mention only that you will see subtitles at the bottom of the screen, in Russian. They could as well be in forty-two other languages, so that the people of Tibet, where the glaciers are melting, and the peoples of the Middle East and North Africa, where the land is withering from drought, and the peoples who live along the coastlines of the world, where the seas are rising . . . they can *all* follow the text of this film. Think about these people, Norway, as you watch this film. Think about them, and think about your own deep values, the values which make you genuinely Norwegian.”

The lights in the theater dimmed completely as Aili Biriita, law student at the University of Oslo, and something more . . . walked off the stage.

Now the Wearers of the White Caps watched, with fascination and pride, the four parts of Aili’s presentation. We heard again the words spoken so clearly, so firmly. We heard the footsteps along the edge of the stage. We saw the pictures on the screen, of the Arctic ice cap and the crown of northern lights; of the green algae growing on the underside of the ice; of the loss of ice since 1979; of the fiery red-orange nuclear mushroom; of the wind turbines standing in majestic rows in a silver-blue sea; of solar panels harvesting the energy from the sun; of children lying in the rubble of a war zone; and of the stained glass windows of a cathedral.

The translators could imagine their various texts running along the bottom of the screen. The Russian text, in Cyrillic letters, was sharp and clear; the other texts would be equally clear. Yes, our team had done an excellent job.

Near the end of the film, we heard Aili’s words, “Good people, when you leave this meeting hall today, close behind you the door to the old, and open the door, a dozen doors, to the new.

“And neighbor shall reach out to neighbor.

“And nation shall reach out to nation.

“So that together we can lift our faces to the benevolent sun, and to the boisterous wind, and to the bountiful seas.

“So that together we can work to heal the wounded Arctic, and cap again the planet with the great curving sheet of ice which has kept our world comfortably cool . . . since the very beginning of our long human journey.”

She paused.

“Yes, let us honor the Creator . . . by honoring the creation.”

With her hands over her heart, she bowed.

“Ollu giitu. Thank you very much.”

Then she walked with dignity across the stage . . . until she disappeared, passing the torch to those who would listen.

The lights came up. Aili Biriita walked once again to the edge of the stage, where she bowed to the applause, showing us, one and all, her round white cap.

* * * * *

The next day, a gorgeous sunny Sunday, the Wearers of the White Caps gathered for a final picnic—a celebration picnic—at Sognsvann.

The toddlers paddled in the shallows while the swimmers hiked the trail to the two piers at the far end of the lake.

At the picnic tables, we feasted on salads and spicy rice from around the world, while musicians serenaded us in a dozen different languages.

And then . . . we gathered for our picture, the picture which would be on our website: a portrait of the crew which had made the film. The Wearers of the White Caps, all sixty-two of us, stood on the beach with the blue-black lake behind us, while the photographer stood on a grassy hill slightly above us.

We all, of course, wore our white caps. And Aili Biriita, of course, stood front and center. I stood beside my mother a bit back in the crowd . . . holding her hand, squeezing her hand, with happiness.

“All right,” said the photographer, “on the count of three, I want you all to say, ‘Buuuures.’” As if we were saying hello to the world.

“One, two, three, Buuuures!”

As we all said “Buuuures!”, our lips rounded out with the “uuuuu”.

Click.

* * * * *

On Monday, August 12, we gathered at the Center for what would truly be the Launching.

The website, with the Sognsvann Portrait added on Sunday evening, was up and running, worldwide, on Monday morning.

The letters which we would send out today by email—letters in forty-three languages, plus Norwegian, introducing the film—were ready to send.

The film itself, now that it had passed its first public viewing, was accessible as a YouTube with a click on the website. No charge. Anyone in the world was welcome, without paying a penny, to stream Aili's lecture onto the screen of a laptop, of an iPad, of a mobile telephone. Onto a screen at the front of a classroom. Onto a screen at the front of a church, a mosque, a synagogue.

I never fully understood the financial aspects of our project. Aili Biriita and Berit would meet in Berit's office while the rest of us worker bees toiled at our laptops. Berit—wonderful, capable, prodigiously generous Berit—reached out to a network of donors, a network which grew substantially after the showing of the film. Thus we had money to pay the translators, to pay the film studio, and to pay the marketing crew.

Equally important, we had the money to hire a dozen White Caps—many of them immigrants who had not yet found a good job in Norway—to maintain the website, to respond to inquiries from people who needed help or advice, and to build the Weaving of Schools program, so that kids from Greenland could skype with kids from Alaska and Sweden and Russia in a growing network of Arctic schools. Yes, we could launch the film, but that was just the first step. We had to nurture our project, so that, hopefully, it would grow.

So the big job that Monday, with everything else ready, was to send out the letter which introduced the film. The Wearers of the White Caps went to work at nine o'clock on Monday morning, emailing our letter to the multitude of recipients on our multitude of lists. We took breaks to eat lunch, or to step outside into the summer sunshine, then we went back to work and sent out another hundred letters. When the internet slowed from heavy use, some of the White Caps walked the short distance to the Law School Library on Karl Johan Boulevard, where they stretched the library internet to its limit.

Occasionally, while we labored through our lists, someone would sing a song in Russian from a famous Soviet movie, or a song in Persian, centuries old.

When we saw that we would not be finished before dinner, we sent out for pizza, not nearly as good as our picnic banquets, but it would do.

As each one of us finished our final list, sending with a click the final letter, we would cheer, “Long live the Arctic ice cap!” By eight-thirty in the evening, the last typist had cheered the last cheer. We were done!

We shut down our laptops, gathered up our lunch boxes and coffee thermoses, walked with heavy steps down the flight of stairs, then stepped out the door into the cool evening air. I will never forget that we could hear, coming from the harbor, the chimes of the bells in the tower of City Hall, then the slow, ponderous tolling of nine o’clock.

And then . . . the faint tinkling of bells ringing a jubilant melody, high in the yellow-gray sky.

We walked together to the National Theater station, where some of us took the Metro, and others (me) caught the train. My train to Ås pulled out of the station at 9:12. I waved from my window at those few White Caps still standing on the platform.

Then I closed my eyes and enjoyed the gentle rolling of the train. We had done it. We had done all we possibly could. Now it was up to the world to respond.

Law school would begin in a week, on Monday, August 19. Thus my summer vacation consisted of one short week.

Maybe on Saturday my mother and I could go to Sognsvann together, just the two of us. We could swim from the pier. She was a good swimmer, much better than I was.

I wanted to thank her for taking me to Lesvos. I wanted to thank her for giving me an entirely new life.

And then on Saturday evening, we could phone Loreen and Lamar. They were safe in Germany now, in Bremerhaven, welcomed by the good people of Germany.

I wanted to tell them to check out the website.

Part IV

A Letter from Russia

Chapter Fourteen

It began the same way that spring begins in a meadow, where one week there is dirty snow, and the next week there is brown earth, and the next week . . . a carpet of bluebells fills the meadow with joy.

The awakening resulted not from some political platform, or economic principle, or religious creed, but from an instinct which understood that life is precious, life is sacred, and life must be protected.

It began because a growing number of women—most of them older women who had brought children into the world—understood that a curving sheet of ice that capped the top of the world was as essential to life on planet Earth as the sun itself.

They also understood that the invasion of that fragile, mysterious, and absolutely crucial part of the planet by fleets of oil vessels and fleets of military vessels was like taking an axe to the cradle of life.

If that was the best that the Boys could do, then their time was over. A deeper wisdom than “the bottom line” was desperately needed.

The women felt their strength, a strength based on the most ancient of instincts, the instinct to protect life on this Earth. To preserve the continuation of life on this Earth. And to nurture, with caring hands, the full blossoming of life upon this Earth.

That was their job. And now they meant to do it.

* * * * *

On Wednesday, September 11, 2019, during my fourth week as a student of law, I sat in the student cafeteria eating a salad while I mulled over that morning’s lecture in my course on the History of Philosophy and Science, a course designed to help students to think in a proper analytical manner . . . when Aili entered the cafeteria, searched the tables, spotted me and smiled. She hurried over, greeted me with her inevitable, “Bures!”, then sat beside me, opened her laptop and soon had a long email, written in the Cyrillic letters of Russian, on her screen.

I was about to protest that I could not read the Russian when she said, “Here is Liudmila’s translation.” With a click, I saw the same email, in Norwegian.

While I read the first sentence, Aili hurried off to get herself a lunch.

And so, for the next several minutes, I read the letter of a woman whose voice was so genuine that I could almost hear her speaking to me.

“My greetings from Murmansk to the people of Norway,

“I have watched your most unusual film, ‘And Neighbor Shall Reach Out to Neighbor’, which your organization sent to the University in Murmansk, where my husband teaches a course in marine biology. When he and his colleagues saw the film, he knew immediately that I must watch it too. You see, I teach grade school science, and I am always wondering how much I should teach my ten-year-olds about the world which they will live in for the rest of their lives.

“Yes, I can teach them about the algae that grows on the underside of the Arctic ice, but no, I cannot tell them, not yet, not yet, that in time of crisis, Murmansk could well be a first-strike nuclear target. Let them have their happy childhood, before they awaken to the cruelty in our world.

“I have watched your film two times, first with my husband in our apartment, and soon after with my fellow teachers at school. Our son, twenty-seven years old, now living in Saint Petersburg, has promised us that he too will watch your film.

“My husband and I want to thank you for this gift which you have sent to our city. Sergei’s father, Yuri Andreyevich Cherkasov, was an officer in the Red Army division which entered Norway during the final winter of the Great Patriotic War, bringing food and medicine to your people. We of Murmansk, as people of the far North, have always felt a closeness to you Norwegians. We live, in a way, in the same neighborhood, at the top of the world.

“After some days of thinking, Sergei and I have come to the decision that we need to do something more than share the information in the film with our students. (The film will be shown next week at the University, several times, enabling all of the students the opportunity to see it.) Perhaps, being Russian, we feel that a person must actually *do* something, even if unpleasant, if that is one’s moral duty. We have fought off several invasions in our history. What we face now is a *potential* invasion—perhaps an invasion of unnatural warmth in the Arctic, perhaps a military invasion at some point along our northern coast, perhaps both—which we should prevent before they devastate our beloved Russia.”

I glanced up, looking for Aili. She was at the cash register with her tray.

“Sergei and I have decided, though it may seem strange to do such a thing, that we will not celebrate New Year’s Eve, nor Orthodox Christmas in January, with gifts to each other. Because, you see, all we really want is a clean and peaceful world. And anything else, a new tie, a new dress, a new . . . well, we have everything we need, except a clean and peaceful world.

“Every Russian family lost at least one member in that war not so long ago. In the countryside around Murmansk, hikers still sometimes find old battered helmets, empty artillery shells, and even unburied bones. Occasionally, someone finds an unexploded land mine.

“People of Norway, we have a statue in the hills overlooking Murmansk—unlike any other statue in the world—of our Alyosha. He is a soldier carved in stone, thirty-five meters tall, wearing a greatcoat against the cold winter weather, and a helmet, with his rifle slung over his shoulder by a strap. Alyosha is very tall, very strong, and he is staring . . . west. Yes, he stares west toward the Valley of Glory, where Soviet troops turned back the German invaders during the Arctic Campaign in July, 1941.

“But Alyosha also stares west because, we are sad to say, we Russians still fear an attack from that direction. We wonder why those of you in the West, especially the Americans, must always see us as your enemy. Please remember that we Russian people are not the same people as those ‘leaders’ in the Kremlin. If ever there was a people who have suffered from war, and who hate war, and who wish never, never, never again to endure the devastation of war, it is the people of Russia.

“We wonder why the Americans so consistently see us—or are *taught* to see us—decade after decade, as their enemy. What is the possible purpose of political advantage, when the survival of our shared Earth is at stake?”

Aili sat beside me. I glanced at her. With a cup of coffee in her hand, she stared at the text.

“I will tell you one more thing about our Alyosha. After a wedding ceremony, and before the celebration banquet, the entire wedding party drives in a caravan of cars into the hills to visit Alyosha. To *thank* Alyosha. To tell him ‘SpahSEEbah’ for what he did, so that today our young people could join in marriage and have a full life ahead of them. People of Norway, when our son Pavel was married to his Natasha in December five years ago, the bride, wearing her white dress, and the groom, wearing his black suit, and all of us in the wedding party . . . yes, we walked through snow half a meter deep—through *snow*—from the parking lot to the platform on which Alyosha stands, so that we could lay our red carnations beside the eternal flame. So that we could say ‘SpahSEEbah’.”

I looked at Aili. She was reading with such focused attention that I did not interrupt.

“If I speak of today, I will tell you that the people of Russia are tired of hearing once again from Washington about their many nuclear weapons. We are tired of their

missiles on our borders. We are tired of sanctions in the relentless American effort to keep us weak. We wonder if the day will ever come when we can move beyond the old suspicions and the shabby lies, so that we could work together to heal the Mother Earth who takes care of all of us.

“Norway has a distinguished heritage in the Arctic. You have sent many explorers in their ships to study the mysteries in the North. Russia too has a distinguished heritage in the Arctic. We too honor our explorers in the North. Can we not join together to study this modern threat called Global Warming? Can we not sail together, Norwegian scientists and Russian scientists, with the scientists of a dozen other nations, working together on the decks of modern research ships?

“And especially, can we not come to the decision, at really very little expense, that the time has come to turn away from oil, and to embrace instead the sun and the wind? Let us, as nations with a moral commitment to the future of us all, sign and ratify the treaty which states, ‘The Arctic shall forever be *protected* from the extraction of oil, or any other mineral. The Arctic shall forever be protected from military conflict. The health of the Arctic is crucial to the health of the planet. Therefore, the peoples of the world pledge to do all that is necessary to restore the Arctic ice cap to its original size, and to restore the life in the Arctic to its original abundance.’”

I turned to Aili. “Well, that’s it in a nutshell. And from a Russian teacher.”

“Who walked through the snow to lay red carnations beside the eternal flame.”

Which was something that *I* had never done.

The writer finished her letter, “With cordial greetings, Olga Cherkasova.”

I set down my fork, with a small red tomato still on the prongs. This was the first letter from Russia that I had ever read. It was so deeply thoughtful. And here we were, ready to annihilate each other.

“What I think we should do,” said Aili, “is translate Olga’s letter into all forty-three languages, then launch it on the send-to-all list. Her voice will reach a lot of people. Maybe others will write, who wish never, never, never again to endure the devastation of war.”

Following my afternoon class on Private Contracts and Purchase Rights, I met Aili at our new office at 21 St. Olavs gate, second floor, close to the law school. (One of our financial patrons, who remained anonymous, had provided us with ample office

space at a convenient address. Eighteen White Caps were working there now; by mid-December, there would be thirty-two, responding to inquiries from around the world.)

Aili, who had just finished her own afternoon classes, was talking with Adnan, our Arabic translator from Syria, who was now the office Director. She suggested to him that he ask Liudmila to write to Olga, thanking her for her letter, and asking for permission to translate it and to send it out to other recipients. And . . . would Liudmila please ask Olga for a picture of herself and her husband.

And maybe a picture of Alyosha.

Chapter Fifteen

I never thought of myself as part of a global generation. I guess that's because we never had anything really to *do* together. We followed the pop stars in Sweden, in England and in America, and of course we had students from other countries at our high school and at the university. But beyond learning someone's unusual name, we never really knew each other. And we certainly never actually *did* anything together that might . . . have any sort of meaning or purpose.

During the autumn of 2019, the White Caps at our headquarters launched and promoted the Weaving of Schools which Aili had talked about, and which was now a young but growing enterprise.

With a click on our website, any student above the Arctic Circle (or a bit south) could find a list of all the schools, as well as the research institutes, in the Arctic neighborhood. The Arctic schools very quickly reached out to each other. Our industrious White Caps created an entirely new website, Guardians of the Arctic, to which the students from the top of the world contributed blogs, YouTubes, and even a broad variety of music.

And then . . . the White Caps, again as catalysts, created the Guardians of the Glaciers, a network of schools in Nepal, Tibet, Bhutan, India, China, and Pakistan. The students themselves reached out to Canada and the United States, as well as to countries in South America, which had glaciers, or rivers that depended on glaciers. The students reached out as well to Norway and Switzerland. They created their own network, to which they invited glacier research institutes around the world. Now a sixteen-year-old girl in Tibet could correspond by email with a top professional researcher in Switzerland. A university student in Pakistan could correspond by email, even skype, with a growing list of students who would send pictures of their own glaciers (pictures from the past, pictures from the present), as well as temperature readings through the seasons, data on rainfall and snowfall, and measurements of runoff in cubic meters of water per minute.

The students shared their music, they shared their poetry, they shared their outrage, and they shared their determination. Yes, they shared a growing voice, a voice that would continue to speak through the decades of the 21st century.

Every day after classes at the law school, I would hurry to our headquarters to learn from the White Caps what *they* had learned today. We of course posted every major step of progress on our website—our vibrant, ever-growing website—so that

the White Caps, as well as young people around the world, could watch as yet another student network grew: the Guardians of the African Farm, the Watchers of the Rising Seas, the Survivors of Hurricanes, the Survivors of Floods.

When the Guardians of the Arctic began, in late October, to send us pictures of themselves—in Russia, in Canada, in Alaska, in Greenland, in Finland—wearing white caps which some of them had knitted, we cheered at headquarters, and posted their pictures on our website.

* * * * *

Something else happened in October. People read Olga's letter. A growing number of people decided not to give gifts during the holiday season to people who already had everything they needed. Instead, they would contribute to the building of genuine schools, with permanent, well-paid teachers, in the refugee camps around the world. There were roughly sixty-five million refugees, a large proportion of them children and teenagers . . . who could either spend their time getting an education, or becoming more and more bitter.

The Gifts for Peace people would contribute as well to a growing number of medical clinics, with permanent, well-paid health professionals, so that life in a refugee camp did not have to be a daily nightmare.

We set up a new website for Gifts for Peace, and once again discovered that our small efforts as a catalyst enabled a network to grow.

* * * * *

Early in November, I received a poem from Loreen in Bremerhaven. The poem was in Arabic, which our translators rendered into their forty-three languages. I had no idea that Loreen could write such a poem, but it sprang from deep in her heart, and it told her story extremely well.

She Would Like to Speak with You

What is it like to be a refugee?

Start with someone who is a librarian, a nurse, a teacher, a journalist,
 Someone who is also a mother, a wife, her mother's daughter,
 Someone who has brought life into the world, one, two, three times,
 Someone who never raised her hand against anyone,
 Certainly never with a knife, never with a gun. Never with a bomb.

Fire artillery shells at her apartment building,
 Shoot her brother with a sniper's bullet,
 Turn her daughter's school into a prison where her uncle was tortured in the gym.
 Take away her home, her job, her beloved cat, her family pictures, as you
 Toss her into the back of a neighbor's pick-up truck in the middle of the night,
 So that she can ride in the dust with her husband and children toward a border
 Which she already knows is closed.

Let her watch the last of her family's money flow into the hands of smugglers.
 Let her share the last of her family's food with strangers who have none.
 Let her wonder why the nations who have so much money for their endless wars
 Are strangely absent while she sleeps on concrete, in mud, beside railroad tracks,
 In the rain.

Let her know the parched heat of a desert,
 Let her know the cold wet wind, the choppy black waves,
 The wail of her terrified child,
 As she crosses the sea at night from the hell of war to hopefully some lesser hell.

Let a stranger in a wetsuit carry her child to the rocky shore.
 Let her lose her woolen scarf as she takes from a stranger's hands
 A dry sweater, a dry coat.

Let her be taken with her family by bus to a nice safe camp where they can
 Eat and sleep and meet briefly with a doctor,

Before another bus takes them across the island
 To a “detention center” which is a prison
 Without enough beds,
 So they sleep on concrete, inside a barbed-wire fence, under the same stars
 That once shone over her home . . . her home.

What is it like to be a refugee?
 She would like to speak with you, so that she could say,
 “Once I was a person too.”

We posted Loreen’s poem on our website.

* * * * *

A group of students in the Netherlands announced that they would not buy any car that burned oil. They would buy and drive only electric cars. Declaring “I ride electric, or I ride my bike”, they challenged the other students of the world to follow their example.

We linked our website to their website. As the network grew—as more and more young people took the pledge—they sent a powerful signal to the car makers around the world: If you burn oil, we will put you out of business.

Now *this* was a global generation in action.

* * * * *

Aili Biriita, fourth year law student now working on her master’s degree in International Human Rights, began to do pioneering work in an entirely new field of law, where the laws were not yet written.

She and I spent a Saturday afternoon in November at Sognsvann, when the water was too cold for swimming, and all the bright yellow leaves of the birches had fallen. We stood together on the end of the pier, on a day when the sky was pale gray and the lake was slate blue, drinking cups of coffee and talking about her vision for a new set of laws for creatures still unprotected. Aili wanted to write a Bill of Rights not for the peoples of the world (that had been written, as the United Nations Declaration of Human Rights, adopted on December 10, 1948), nor for the Indigenous

Peoples of the world (that had been written, as the United Nations Declaration on the Rights of Indigenous Peoples, adopted on September 12, 2007), but a Bill of Rights for the living creatures, for life itself, in the Arctic.

“Anna,” she said, staring across the lake for which she felt, in her Sami way, a deep reverence, “we need a Bill of Rights for the algae growing on the underside of the Arctic ice. We need a Bill of Rights for the copepods and the pteropods and the krill, for the herring and the haddock and the cod, for the seals and the bears and the dear, ugly walruses. For the whales that honor us with their presence here on planet Earth. We need a Bill of Rights for the life—for the *life*—on this tiny ball of dust.”

I often wondered why Aili chose *me* to be her friend, her protégé, her apprentice. What could she possibly learn from me? Perhaps it was that her own Sami people already understood her, and so she needed a Norwegian who was at least willing to listen. Well, that was me. I never for a moment thought about returning to the safe and comfortable life of entitlements paid for by oil money. I rarely, if ever, turned on the television any more. I was far more interested in how much the Arctic ice cap had shrunk this summer, than I was in who was Norway’s latest Idol. I was far more interested in what the students in Laos were doing, than what my dreary, small-minded government was doing. The lessons that began that night on the beach in Lesvos when Nikos put Lamar into my arms . . . those lessons continued without end.

“I have two more years of law school,” Aili said, “and then I will have a master’s degree. I think about going on for a doctoral degree. Then I will outweigh any peewee politician in the government. I can speak before the Supreme Court. I could even one day be a *judge* on the Supreme Court. And then I could truly be the advocate for life on this planet. For the reindeer and the polar bears and the whales. For the sheet of ice which enables life to flourish where half the year is dark, and the cold of the Arctic night reaches forty degrees below zero. And . . . for the algae that lives on the bottom of that sheet of ice.”

Now she was quiet. I knew not to interrupt her silences.

And then she began to *yoik*, to the slate-blue lake, to the dark green forest, to the pale gray sky . . . and to the life, the *life*, which the thick red books of laws had not yet embraced.

Chapter Sixteen

Aili suggested to the White Caps at headquarters that they send out a letter to the Guardians of the Arctic, the Guardians of the Glaciers, the Guardians of the Farm, the Guardians of the Grandchildren, and everyone else on our ever-growing global team, a letter *suggesting*—that was Aili’s management style, to suggest—that they write a cordial letter to each of the oil companies (list attached) which have shown an interest in oil exploration in the Arctic, explaining to them why drilling for oil in the Arctic could lead to a series of unprecedented catastrophes. She did not supply a form letter, but asked everyone to write a letter from their own point of view.

She suggested that they conclude their letter by stating their intention to join a permanent global boycott of all oil companies operating in the Arctic.

She also suggested that they send their letters not by email, but on paper, which would give the letters “gravitas” (one of Aili’s favorite words, adopted from a law school lecture). A paper letter could not be deleted; it was there in your hands to be read.

Once again, a nudge from the White Caps, serving as a catalyst, resonated throughout the networks. By mid-December, the ExxonMobile headquarters at 5959 Las Colinas Boulevard, Irving, Texas, 75039-2298, USA; the Rosneft headquarters at 26/1, Sofiyskaya Embankment, 117997, Moscow, Russian Federation; the Statoil headquarters (new name: Equinor) at Forusbeen 50, 4035 Stavanger, Norway; as well as a dozen other companies, were receiving not Christmas cards . . . but thousands of letters from over a hundred different countries, both north and south of the Equator.

Anyone in Irving, Texas who collected stamps must have been delighted by this unexpected bonanza.

Not a single company wrote back to say that because of our letters, they had decided to cancel all further operations in the Arctic. But, they had been alerted that somebody out there—a lot of somebodies—were watching.

* * * * *

We received an email from the Institute of Solar Technology in Howrah, West Bengal, India, where the students and their teachers, who had seen our film, wrote to us with three excellent questions. The first question was one which our scientists, engineers and governments should have answered twenty years ago: “What would be

the most efficient design for an international grid which would provide clean energy—from all sustainable sources: solar, wind, oceanic, geothermal, and biomass—to every country in the world, so that we could power every city, town and village with 100% clean energy in the most economic and democratic manner possible?”

Yes, here was a 21st century question.

Second: “How do we provide clean energy to people in remote areas, far from a modern grid? How do we best harness the sun and the wind to power villages which have never had electricity, on a global scale?”

Yes, how do we reach the millions of people who still live in the Dark Ages, in the most economic and democratic manner possible?

Third: “Were we to spend the money now allocated to military budgets in countries around the world, how long would it take to build that global grid?”

Yes, the students in India saw the connection between the black weapons of death and the green kilowatts of life. Between two entirely different self-chosen human destinies.

We found the Institute of Solar Technology on the map: it was in the far eastern part of India, near Bangladesh, on a river that flowed into the Bay of Bengal. The Institute trained young men and women to become “skilled and motivated employees and entrepreneurs in the next generation of community and economic development.”

Entrepreneurs, who wanted to build up their own businesses, as well as their communities, and who would benefit greatly from the construction of a global grid.

The White Caps especially liked the wording of their mission statement: “Our mission is to create awareness and remove darkness from the society and also to reduce carbon emission.” Yes, that was it in a nutshell.

We posted their letter on our solar website, and we sent it, with our own cover letter, to umbrella organizations around the world, such as SolarPower Europe in Brussels, whose “vision is to ensure that solar energy is the leading contributor to Europe’s energy system.” If SolarPower could weave European countries together, they could help the students in India, and wherever else the sun shone on planet Earth, to link up with solar engineering companies on every continent. Together, they could begin to design the grid of the 21st century.

* * * * *

One evening, after a long day of law classes, followed by a couple of hours at headquarters, followed by several hours of reading law texts—written in the most ponderous manner ever conceived by the human mind—I was dead asleep in my tiny apartment when the phone rang on the little table beside my bed. Staring blurrily at the glowing screen, I tapped a green button and mumbled, “Hello?”

“Bures, Anna. Listen, I’ve been wondering: Why are scientists so silent? They know more about global warming than anybody, but they almost never *speak* to us. They write their articles in their dry academic style, and then publish their articles in journals that almost nobody reads. Sometimes a scientist will be quoted in the popular media, speaking about his own particular field of research. But they never talk to us about the Big Picture.”

I sat up in bed and turned on the lamp on the table, lighting my student apartment at Krinsjå, then I said the only thing I could think of to say, “My father is a scientist, and he *never* speaks.”

“Well, I’m tired of this code of ethics which says that scientists must tinker in their labs and tromp around in the field, but never share the abundance of information which they gather over a lifetime. They are supposed to be objective, impartial, removed from the crass commercial world and the bedlam of politics. But that does not mean that they can’t thump on a podium and warn us when a warning is urgently needed.”

I stood up and slipped my feet into my pink slippers.

“Aili, you’re right. What should we do?”

At the sink in the tiny kitchen, I ran the water until it was cold.

She of course already had a plan. “We’re going to hire a couple more White Caps, who will have the job of maintaining a blog on which scientists from around the world can speak to us—to *all* of us—about the Big Picture as they see it. No jargon, no footnotes, no citations, just the truth, straight from the heart, written in ten powerhouse paragraphs.”

I filled a glass with cold water and took a long drink.

Aili continued, “I’ll bet there are *legions* of scientists who have been waiting for years to speak. I want the White Caps to give them the opportunity. How else is a professor of marine biology going to reach a thousand students around the world, students who don’t care about some exam, but who definitely *do* care about life in the oceans?”

“Yes,” I said, ready now to make some minimal contribution, “scientists who know about the methane beneath the permafrost. Scientists who know about drought in Ethiopia. Who have studied ice cores from Antarctica that contain gas bubbles from 800,000 years ago. I would love to hear what they have to say.”

“Right. And no academic ranking. If an agricultural expert has worked with African farmers for twenty years, I don’t care whether he does or does not have a doctorate from Oxford. I would just like to give him the opportunity to *speak*.”

“And of course,” I said, “students from around the world can respond with comments and questions.”

“Of course. We’ll launch a genuine global classroom.”

I walked to the window and opened it, letting in the cool air of late autumn.

“Aili, not just students.” I was thinking about my mother. “We’ll launch a global classroom in adult education as well.”

Above the roof of a nearby apartment building, I could see the bright white speck of a planet in the southeastern sky. Saturn, or maybe Jupiter.

Aili liked my idea. “I’ll bet the older folks will double the enrollment. Global education, from kids to grandparents. When was the last time we did *that* on planet Earth?”

Chapter Seventeen

You see, it was always in there.

We finally, finally, finally found the *best* that is in us.

Why? What finally enabled us to look deep inside ourselves and discover the talent and the courage and the determination that had always been there?

What finally compelled us to *believe* in ourselves, rather than accept that we were already as good as we could ever be?

A catalyst has no capacity to effect change unless the components themselves are ready to progress through some evolution into a new state of things. During the winter of 2019, leading into the winter of 2020—some would say during the Christmas season, others would say during the holy time of *all* religions—the components were ready.

We never knew how many people read Olga's letter, about wanting only one gift at Christmas: a clean and peaceful world.

We never knew how many people, as they watched our film, listened to Aili speak about the catastrophe waiting in the Arctic, about the catastrophes already raging in the war zones . . . where children lived.

But we *do* know that during December, a growing number of Russian women requested that the film be shown, with Russian subtitles, on Russian television . . . and it was, during the first week of January.

We do know that a growing number of women, backed by the voices of a growing number of young people, not only requested but *demand*ed that the film be shown in a growing number of schools around the world, beginning in January.

And Neighbor Shall Reach Out to Neighbor was shown in Norway on NRK on Sunday, December 15, at the height of the shopping season. Whatever sermons had been given in church that Sunday morning . . . perhaps did not reach as deeply into the hearts of people in the fishing villages of the north, of people on the farms in the south, of people in their tidy suburbs of Oslo, as Aili speaking to them on Sunday evening about building a cathedral.

No doubt there were other reasons for the drop in retail sales during the pre-Christmas rush. People who had long ago tired of the constant bad news from battlefields and refugee camps . . . began once again to look at the pictures of the

camps where sixty-five million refugees lived. They looked beyond the fences topped with coils of barbed wire . . . at the faces behind them. They realized that the Yazidi women had been held in captivity for a long, long time. And they understood that although giving a donation to Save the Children or Doctors Without Borders was a good thing to do, what we *really* needed to do was to turn our gaze, our probing stare, from the refugees behind the fences to the soldiers behind the artillery, and to the politicians behind the soldiers.

We did not yet realize the power of weaving the schools into a network. We did not yet realize the power of tapping the limitless energy of young people, as well as their innate sense of right and wrong, their outrage at the devastated world they were about to inherit, and their determination to build something far better. When they discovered that their millions of voices were, as a global generation, one powerful voice, they filled the shabby void of indifference and apathy and despair with their vision of a new beginning. During those cold, dark winter months, the young people strode out from the wings of the world stage . . . onto the stage itself, with a new script.

When young people returned to their classes in January, many of them were wearing white caps. They understood that the melting of the Arctic ice cap *was* the most important event in their lives today. They understood that if the dominoes in the Arctic fell, all the way to the thawing of the permafrost and the release of nobody knew how much methane, it was Game Over.

Students weaving their schools together wore white caps in the selfies which they sent to each other. Chinese white caps, Pakistani white caps, Brazilian white caps, Inuit white caps, Sioux white caps, Hawaiian white caps, Vietnamese white caps.

White caps appeared in the law classes at the University of Oslo. (I, of course, wore mine.) They appeared on the train to Ås. They were worn—making perfect sense—by Norwegian skiers on television, racing through the snowy forests of Europe, or zigzagging down a mountain, or sailing off the end of the Holmenkollen ski jump.

The white caps became the symbol of a new generation.

Big Oil, take note.

Yes, we looked deep inside and found the *best* of who we were. We began to believe in ourselves, not as remnants of the 20th century, but as the pioneers of the 21st.

* * * * *

In mid-February, 2020, we witnessed the first concrete manifestation on a global scale of what the new generation could do.

In mid-October of 2019 (as you will recall), we received a thoughtful letter from the Institute of Solar Technology in West Bengal, India, with its three questions.

The White Caps sent that letter out to our growing network of schools, as well as to clean energy organizations around the world.

In late October, a graduate student of electrical engineering at the University in Trondheim—an Indian student from Madras named Suresh V.—wrote to us that he would like to coordinate the effort to answer these three questions. “I think that by dividing this project into various regions, and then by setting firm deadlines, we could have a very good rough sketch of a global clean energy grid within four months.”

We were impressed!

“A separate investigation into remote area electrification on various continents could be completed and summarized in the same period of time.”

Could such a vast research project really be completed by February?

“Regarding the re-allocation of military budgets to the construction of clean energy production sources, we will need two teams working independently, one calculating military costs, the other calculating energy costs. We can then compare these two sets of data in our analysis of how best to respond to the urgent needs of seven billion people in the 21st century.”

He added, “Thank you for giving me a most inspiring subject for my doctoral thesis. I had grown tired of trudging through the brambles of advanced mathematical computations. I feel that as we answer these crucial questions, we are plowing fresh ground, seeking genuine solutions to genuine human needs, which gives me enormous pleasure.”

We gave Suresh our blessing and supported him with an abundance of contact information, to which he added his own network of contacts. He went to work in early November, sent us progress reports in December and January, and then stepped onto the world stage in late February . . . with his detailed blueprint for the foundation of a 21st century clean energy grid.

Suresh began his report by giving credit to the team of students, teachers, engineers, economists, politicians, entrepreneurs and visionaries who had—in four

short months—investigated the energy needs of their respective countries, as well as the clean energy potential, primarily from sun and wind. The team had then woven their countries together into a global quilt, onto which they sketched their 21st century clean energy grid, which included undersea cables connecting Ireland and Great Britain to the European continent, and North Africa to southern Europe. The designers of this unprecedented grid paid no attention to political boundaries; they connected Russia to Europe in the west and to Mongolia and thence to China in the east. They even waded into the battlegrounds of the Middle East, setting up coastal desalination plants powered by wind turbines and solar farms where they were best suited, never mind the chaos on those coastal sites today.

A second team proposed off-the-grid energy solutions for remote villages in India, in Africa, in Tibet, in Nepal, and in the refugee camps of the world. Millions of people today still lacked a light bulb in their homes. The second team showed us how to connect ten billion light bulbs, and stoves, and water pumps, and computers, to the sun and the wind . . . with small-scale solar farms and turbines.

Two additional teams tallied the costs and the benefits of building a global clean energy grid, which they compared to the costs and benefits of feeding the war machine.

What was the potential growth in jobs, both during construction of the grid, and as the result of new electrical power in offices and factories? What was the potential growth in tax revenues, bolstering local and national budgets?

What were the benefits of building new schools and medical clinics, which would provide their services to a growing numbers of people for decades . . . when compared to the benefits of building tanks and artillery and war planes and battleships, which either sat unused, or went out on patrol as a potential threat, or actually destroyed schools and hospitals and apartment buildings and power stations and military bases?

Overall, the cost of building a global clean energy grid, which would create millions of well-paying jobs, was far less than the total sum of military budgets which today impoverished the world. The moment a wind turbine or a solar farm was connected to the growing grid, it immediately began to contribute to the world economy. Whereas the moment a new tank rolled off the assembly line, it contributed next to nothing except profits for the company that had build it, as well as a little

something for the politicians who received (under the table) a percentage of those profits.

In addition, what were the long-term costs of destroying a nation by the ravages of war? On the other hand, what were the benefits of bringing a developing nation into the 21st century by providing it with clean electricity? Let the people of Iraq and Afghanistan and Syria and Yemen answer those questions.

The report stated with confidence that by diverting the money now spent for military purposes . . . to the construction of a global system of sustainable energy, we could power the world with 80% clean energy by 2040, at the latest. Those twenty years, from 2020 to 2040, could be the two most important decades in all of human history.

The report concluded with a cost analysis of drilling for oil in the Arctic. The global grid would be so efficient in providing clean power for both heating and transportation, that there was absolutely no need to drill for any more oil. Burning the oil would of course lead to more pollution in the atmosphere and in the oceans, which would lead to an accelerated melting of the Arctic ice cap, which could lead to . . . something worse than even the destruction of Syria. The report thus recommended: No drilling for oil in the Arctic.

An addendum at the end of the report added one final note. Because the clean energy industry was a young industry, still in its pioneering years, it provided a far greater degree of gender equality than most other industries in the world. Wind energy was not an Old Boys' Club. Women designed the next generation of wind turbines, women built the enormous blades, women analyzed global economic figures, and women spoke about their vision of a clean and prosperous future at conferences and at board meetings.

Yes, the sun and the wind would enable women to work at a level of genuine responsibility. And the sun and the wind would give women a voice.

So, how best to distribute this report, **A Blueprint for the 21st Century**, to the people who needed to close the old door and open a dozen new doors?

The report, consisting of seventeen pages of text plus eight pages of maps and financial charts, would first be translated into at least forty-three languages by our team of Mother Tongues, as they now called themselves.

The report would then be sent by email to our ever-growing lists of White Caps around the world. We would ask them to forward copies to their local and national politicians, and to their media.

But this report was so important that we wanted to go a step further. We recommended that it be read aloud . . . in church, as a substitute for the regular sermon. Or in a classroom, as the springboard for a vibrant student discussion. Or even on a street corner, on a subway platform, in a park, where it could be read with a resounding voice, so that people passing by might pause to listen. A reader's assistant, a little sister perhaps, could hand out cards with the report's website address.

Yes, we began to believe in ourselves. We began to believe in what we could do, as architects of clean energy, architects of prosperity, architects of democracy, and as architects of peace.

Chapter Eighteen

When we began to believe in ourselves, when we began to feel a growing sense of *hope* in a world that was melting in the Arctic and bleeding in Syria . . . something else happened, something that no one had anticipated, but which of course had been hidden within us, waiting.

During that restless, expectant winter of 2020—especially after New Year’s Eve had proclaimed a new decade—we heard a blossoming of music.

It was not the old thump-thump machine music, manufactured in some high-tech studio and shipped out to the Smartphones of the world. It was not the ever repetitious string of brain-dead lyrics so utterly devoid of meaning that a numb mind would never notice.

This music had a bouncing, playful, human rhythm, as if new voices were awakening.

This music had a confidence, no longer marching to somebody else’s beat, but striding with an eager step of its own.

This was music which said, “Yes, the cold dark winter has been long, but spring is coming. *Really* coming.”

This was music that a person could not listen to while hunched over and staring at images on a screen. No, this was music that made you want to sit up, to look out the train window, and to decide that you were going to get off at National Theater, as usual, but instead of walking straight to the first lecture of the morning, you were going to head in the opposite direction, down the hill to the Oslo wharf, where you were going to walk past the cafés and the enormous power-boats bought with oil money, all the way to the end of the wooden pier, where you could stare south into the long silver-gray stretch of Oslo Fjord. There in the misty distance, you could see the tiny triangle of a sail. And while you listened to that music—a woman singing in Persian, about, you imagined, her dreams for tomorrow—you put down your briefcase heavy with books, you shook loose your hair, and you began to dance as you watched the sun glittering on the water.

This music had a power that wove into people’s lives. It was not the toss-away music that filled the background while you pumped iron at the gym. It was music that

was part of the moment in history which you were living today. And if you didn't have a moment in history, you began to look for one.

This music sang to you with a Polish voice—a man's voice, so gentle, rising to such exuberance—that you wished you could read the lyrics of the poem that was flowing from his heart.

This music sang to you with a Cuban voice—a woman's voice, strong, immeasurably rich with undertones of pain—as if she were telling you that she had weathered the storm, but now, with the help of a conga drummer bursting with irrepressible energy, she was singing on behalf of her people, who were rising up. Who were rising up. Like the sun blazing over the sea at dawn, they were rising up.

This music—a choir of voices—sang to you from Tibet, up there on the tallest mountains in the world, where the air is thin, but the spirit reaches back a thousand years. The choir sang down to the rest of us at sea level, letting us know that they too, they too, they too . . . were a part of our world.

This music opened our ears and sang with a new vibrancy, a new urgency, a new hope.

Yes, this new-born music, weaving into our lives, did something which the old “entertainment” music never did: it awakened a strength long dormant, it awakened a courage which we never knew we had, and it awakened a new spirit which enabled us, which *encouraged* us, to reach out and say “Bures”, and “Buenos dias”, and “Dobrah ootrah” to the neighbors we never knew we had.

Part V

Three Questions

Chapter Nineteen

At the White Caps headquarters in late February, we received an email from the Paris office of International Women’s Day, notifying us of something that even Aili had never considered. On Saturday, March 7, 2020, the theme for International Women’s Day was going to be something unprecedented. Women around the world were going to demand a global referendum which would enable people in every country to vote on three questions.

The three questions did not address women’s issues such as wages, or gender equality. Instead, they addressed the welfare of Mother Earth herself.

First: “Shall exploration, drilling, and extraction of oil within the Arctic Circle be forever halted?”

Second: “Shall the Arctic be declared a protected sanctuary on Mother Earth, where mining of any sort, as well as military maneuvers, shall be forever halted?”

Third: “Shall all efforts be made to replace fossil fuels with clean energy around the world by the year 2040, so that the melting of the Arctic ice cap can be halted as soon as possible, enabling life to flourish within the Arctic sanctuary?”

For the first time in human history, the peoples of the world would vote on an issue urgently important to all of them: how to build a far better world than the one they lived in today.

The idea—the *demand*—for this referendum had come from the women of France. *La belle France* had a long history in social innovation. Five hundred years ago, France had taken the seeds of the Renaissance in Italy during the 1500s and planted them in French soil, then had nurtured them to full fruition, enabling the Renaissance to spread throughout Europe. Two hundred years later, during the 1700s, France had been the home of the Enlightenment; the writings of French philosophers were woven into the spirit of both the American and French Constitutions. And then in December of 2016, France had hosted the Paris Climate Conference, where the Agreement was signed by 195 countries in an historic effort to reduce emissions . . . and to develop clean energy around the world.

The women of France, whose ancestors had more than once mounted the barricades, now demanded that the peoples of the world—including the young people—be allowed to determine their own future, their own destiny. The oil

companies would no longer control the future of seven billion people who urgently needed a healthy planet.

“Well,” said Aili, holding a printed copy of the email in her hands, “we’re no longer a network. We’re a team.”

And so it came to pass, that on Saturday, March 7, well-organized women gathered at giant rallies in the cities around the world. The speakers addressing the crowds introduced the idea of a global referendum. They read and discussed the three questions on the which the peoples of the world would vote.

They explained that during the next six weeks, the citizens of 195 countries would gather enough signatures to qualify for this global referendum.

The speakers explained to the silent, attentive crowds, that on Earth Day—Wednesday, April 22, a little over six weeks away—the peoples of the world would once again gather at giant rallies, to demand that their 195 governments authorize this referendum, so that it could be held in each country with the same high standards as a national election.

Any government which refused to authorize the referendum would be confronted with a series of rolling strikes and targeted boycotts, starting on April 23—“tomorrow”—until authorization was publicly granted.

The referendum would be held in the autumn, on Saturday, September 12.

Minimum voting age was *fourteen* years old. The young people who would inherit the great challenges of the 21st century should certainly be able to vote on questions of such importance.

The speakers explained that the United Nations would *not* monitor this referendum, because the major powers in the Security Council would simply block the vote. Instead, the women of the world would organize and conduct the referendum, with the assistance of students from the schools of each country. They would thereby set a precedent, avoiding all political parties, and avoiding all campaign contributions, thus enabling the people, finally, to speak.

With regard to the question of funding this immense and unprecedented undertaking: the women of France would make sure that the women of Vietnam, for example, had the funds they needed to collect signatures, to print ballots, and to monitor polling stations in the schools. The cost was minimal, when compared to what was at stake in the Arctic.

The women were organized, and the women were tough.

The time had come to do more than break through the glass ceiling. We were going to write a new chapter in the book of human endeavor. We were going to be pioneers, not by conquering somebody else's land, but by releasing, and nurturing, the unique abilities of a group of people—the women of the world—whose talents had been ignored, and squandered, for centuries.

With our eyes not on old hatreds from the past, nor upon the profits to be made by a select few, but upon the unprecedented possibilities of a thousand tomorrows, the women of the world announced that their time had come.

* * * * *

On International Women's Day in Norway, my mother and I, wearing our white caps, stood with the other White Caps and their families in the immense crowd which had gathered in Frogner Park in northwest Oslo. We did not march along the usual parade route from the railroad station to the Parliament, because our numbers were far too great for the confines of downtown Oslo. And further, we did not gather just to present our petition to the politicians inside the Parliament. We had a much larger purpose.

We gathered in the park which was an outdoor museum of the sculptures of Gustav Vigeland. The sculptures were not of kings and generals, but of ordinary people. 212 granite and bronze figures, roughly life-size, portrayed people, unclothed, in every stage of life, from infants to the elderly. At the top of a hill, 121 granite figures were wrapped around a tall monolith, as if people, not stone, rose toward the sky. This was the people's park, and we were the people.

Pictures from a helicopter on the evening news showed a crowd of over two hundred thousand people on the huge lawn of Frogner Park. My mother and I had arrived early, so that we and the other White Caps could stand right up front, at the bottom of the stone steps which led up to the speakers' podium.

We wanted to be close to our Aili when she spoke.

I had never been inside such an enormous crowd, and I was surprised by the *energy* which I felt. The mood was both festive and defiant. People were out in the springtime sunshine, wearing boots because patches of old snow still covered parts of the lawn. Most of the people were women of all ages, for today was their day, although perhaps a quarter of the people were men and boys, clearly welcome. We

were not packed tightly against each other. There was plenty of room to walk around. Some people carried placards, such as “Save the Arctic”, “Long Live the Ice Cap”, and “No More Drilling, No More Killing”.

I will add that we were delighted to see, sprinkled throughout the vast crowd, several thousand white caps.

We listened to the speakers—powerful women who spoke with powerful voices—as they read the three questions. Three questions which made perfect sense. My mother was not alone, I am sure, when she said quietly, “Well, it’s about time.”

Among the speakers was Aili Biriita, wearing her blue and red Sami *gákti* and white cap. With a firm, clear voice that boomed from speakers throughout the park, she told us that the Arctic was warming almost twice as rapidly as the lower latitudes. “The ice cap, which once reflected sunlight, is melting so quickly that open water, which absorbs sunlight, now becomes a bank of heat at the top of the world. That unnatural heat warms the winds which blow over the ocean. The winds in turn warm the northern parts of Russia, of Alaska, of Canada, of Greenland, of Scandinavia. That heat—that highly unusual and long-lasting heat—is already disrupting the seasons on the tundra in northern Norway, threatening the herds of Sami reindeer.”

Now her voice became stern. “The loss of our reindeer may not disturb you, here in your comfortable Oslo. But a winter is soon coming when you will have little snow, and a summer is coming when you will have little rain . . . and your beloved Sognsvann will be a bowl of mud. All it takes is one summer of drought, and the wildfires of California will burn in the forest that wraps around Oslo. That is why, my friends, we need to vote Yes to all three questions in September.”

* * * * *

Following the speakers, the concert began. The program was not music which entertained the audience, but music which gave *strength* to the audience. The theme was “Songs for Mother Earth”, and we heard them in Norwegian, in Persian, in Urdu, in Arabic, in all the languages and musical styles which the immigrants and refugees had brought to Norway.

But it was when the Africans set up their conga drums on the stage, and a choir of women in brightly colored dresses began to sing to us with the energy, the rhythm,

the joy, the endurance, the exuberance, and the ululating power that flourishes beneath the African sun . . . that the cool, bland, tepid Norwegians came alive.

Even my mother started dancing, with a happiness in her face which I had rarely seen. It was as if the Spirit of Woodstock from back in the fabled 1960s had come to touch her magic wand on the crowd beneath the still-bare trees in the park in Oslo. All that pent-up hope, all that childhood love for the mountains and the sea which is part of the Norwegian soul, all that joy that so rarely had occasion to be expressed in our grim and battered world, now came pouring out.

And as the drums thundered—their rhythmic rumbling reached far beyond the park, into the neighborhoods which wrapped around it—and as the vibrant voices of the African women reached out to the peoples of the world, and up to the springtime sun, there was no doubt in anyone's mind that Yes, we would have a referendum in September. And Yes, we would ask our three questions. And Yes, the people would vote—together they would vote—Yes, Yes, Yes.

We together would stop the madness in the Arctic. We would turn our global attention to taking care of that fragile ice cap, and to all of the life which it protected.

And that would be only the first step. If we, together, could create a sanctuary in the Arctic, then there was no end to what we together could do . . . all the way down to the Equator.

Chapter Twenty

International Women's Day in March had been organized by the women. Then they passed the torch.

Earth Day in April would be organized by the young people of the world. They would also be responsible for organizing the Arctic referendum in September. (With some off-stage coaching from the women.) By tackling these two huge jobs, the first global generation in human history would become a tightly-knit generation.

On Earth Day, April 22, the citizens of over 195 nations would ask their government to sign a document—which the citizens themselves had written—authorizing the Arctic Referendum in September, and promising not to interfere in any way.

Although the vote in September would not be legally binding, it would carry an enormous weight, especially for those who had voted. Following a summer of education, and a day of voting for a clean and peaceful world, the momentum of five billion determined people would be unstoppable.

Some critics said that the entire process was hopelessly idealistic. Some said that no government was going to listen to a bunch of kids. Some said that the oil companies would simply hire an army.

Nevertheless, the first global generation in human history was ready to go to work.

* * * * *

Young people between the ages of 14 and 25, whether in school or out working, comprised roughly 18.6% of the world's population. With a global population of 7.758 billion in 2020, young people numbered 1.443 billion. As voters, they had enormous power. The referendum in September was going to be *their* referendum, enabling them to design, and then build, the world which *they* wanted to live in. They understood that protecting the Arctic was just the first step.

Since last September, the White Caps had coordinated the Weaving of Schools into a global network. Now that network quickly grew. Riding on the momentum created by International Women's Day, young people in 195 countries used the next six weeks to gather the signatures required to put the Arctic referendum on a national

ballot. Students divided up the neighborhoods in every city, town and village, then knocked on doors. They were ready to explain in a matter of minutes why the Arctic ice cap was melting, and how that unprecedented event on planet Earth was going to affect the weather here in Russia, or India, or Brazil, or on the slowly submerging Maldiv Islands.

The young people explained that the referendum had three goals: To stop drilling for oil in the Arctic. To turn the Arctic into a protected sanctuary. And to replace fossil fuels with clean energy by 2040.

The vote had nothing to do with political parties. The vote would help to slow down global warming, so that people could live on a healthy Earth.

“Please, we need your signature and your address. Everyone in your family down to the age of fourteen is welcome to sign.”

The pages filled with signatures would be tallied and safely stored until Friday, April 17, 2020, when the cartons—millions of cartons—would be sent by truck and train and boat and plane to the capitol buildings of 195 nations. The students, the women, the media, the parents, the teachers, the churches, the grandmothers and the grandfathers, would follow this process every step of the way. There would be no fraud in this election.

The governments then had four days to verify that the number of signatures (hopefully) far exceeded the number required for a referendum to be placed on a ballot.

The plan for Earth Day on April 22 was very clear.

Speakers would address the crowds from ten in the morning until noon, local time.

From noon until one, the peaceful, civilized, and very determined peoples of the world would pause for a picnic lunch, with families, with friends, with their fellow citizens of the world. They would listen to music from the stage, they would congratulate each other that they had come this far. And perhaps they would look up at the sun, high overhead, and say quietly, “Your time is coming.”

At one o’clock, with live coverage on giant screens, and on the small screens of millions of mobile phones, the presidents and the prime ministers and dictators of each country would address their citizens, acknowledging the will of the people. They would then—as was hoped—sign the document confirming that the Arctic referendum would be held on Saturday, September 12, 2020.

If a president or prime minister hesitated, or obfuscated, or tried to prohibit this democratic vote, he faced a crowd of hundreds of thousands of people already wrapped around the building in which he sat at his desk. They would be peaceful, but they were not about to go home.

The signing of the documents which authorized the referendum would begin at one o'clock on Wednesday afternoon, April 22. The first signing would take place on the western side of the International Date Line, which roughly followed 180 degrees longitude through the middle of the Pacific Ocean. The signings at one o'clock would then proceed in a westward direction, hour by hour, around the planet. News of the signings, accompanied by selected quotes from various speeches, would be transmitted by satellite to the world.

The Republic of Kiribati, a collection of thirty-three atolls and one coral island in the South Pacific, would be the first to speak in the morning, and to sign in the afternoon. The people of Kiribati would no doubt tell the world, once again, that as sea levels were rising, their atolls were disappearing . . . and that their home would eventually vanish.

The signings at one o'clock on Wednesday afternoon would move westward to Wellington, New Zealand; then to Sydney, Australia; and then to Tokyo, Japan. And so on, westward across the great sweep of Asia, to Europe and Africa, to North, Central and South America, to Hawaii, and finally, to a sprinkling of islands in the North and South Pacific.

On this Earth Day, the peoples of the world would demand a referendum in September, a referendum which would be the largest democratic vote in human history. That alone, apart from the outcome, would be a major step forward.

* * * * *

And then, in the midst of these world events, our family exploded.

We were gathered, our family of four, at the dinner table on the last Sunday evening of March, before I would catch the 20:50 train to Oslo and my student *hybel*, the little apartment at Kringsjå which I now called home.

My mother and I were talking about the extraordinary news which I had received that afternoon from Aili herself. The Norwegian Coordinating Committee for Earth Day in Norway, a group of young people from every part of the country, had just sent an email to Aili, asking her to be the Keynote Speaker on Earth Day, just a

little over four weeks from now. She would stand on the podium with the Norwegian Parliament building behind her, and—as we envisioned—an enormous crowd filling the park all the way to National Theatre in front of her, speaking on behalf of the people of Norway. She had spoken in the auditorium at the University of Oslo in May of 2019, almost a year ago. She had spoken in her film when it was launched in September. She had spoken briefly on International Women’s Day. And now she was invited to speak again, as a Norwegian, as a Sami from the Arctic tundra, and as a citizen of the world.

When Aili phoned me—she had received the email an hour ago—she was very excited, but also a little bit frightened. She was just a law student; she had never even spoken before a judge in court, much less to the five million people of Norway who would surely be listening.

“Aili,” I told her, “it’s not just Norway. Every White Cap around the world will be listening.”

“I know, I know.”

And then she was silent. I knew not to interrupt her silence.

Finally she said, “Anna, we did the film together. You listened to me through three rehearsals. I think we’re going to need to do about *five* rehearsals this time.”

“Fine,” I said. “We’ll rehearse at Sognsvann. We’ll stand out on the end of the pier, and you speak to the lake, to the forest, to the sky. When Sognsvann tells you that you are ready, you will be ready to speak to the world.”

Very quietly she said, “Ollu giitu, Anna. Ollu giitu.”

Well, this was what my mother and I were talking about at the dinner table, while my father, preoccupied as usual with his own thoughts, and my little brother, who was cleaning his plate so that he could go back to his bedroom and watch his video war games, contributed their usual nothing to the family ambiance.

And then my father suddenly exploded, “I *don’t* know why you go on with all this.”

Surprised, my mother and I looked at him. He was glaring at her and actually trembling with anger. “You’re going to cut off the oil so you can save the polar bears. What do you think pays for that modern hospital where you work? What do you think funds the research university where I work?”

Now he glared at me, and I could see, crystal clear, that what he felt toward me—hidden by his years of non-communication—was not a shy friendship, nor a poorly expressed love . . . but seething contempt.

“And *you*,” he almost spat, “taking your fancy courses in,” he spoke the words with mockery, “‘human rights’ . . . What do you think pays the salary of all those naïve little professors? And what do you think pays for the welfare program for all of your beloved Sami friends?”

“Welfare program?” I asked, astonished.

My little brother slipped off his chair and quietly slunk off to his bedroom, where he could immerse himself in his war games.

“Yes, and how can you *possibly* think that this Sami agitator who is going to speak at the children’s rally on,” he sneered, “‘Earth Day’ can in any way represent the people of Norway?”

My mother interrupted him, “Henrik, that’s enough.” She sat up in her chair, pointed her finger at him and told him, crystal clear, “Tomorrow morning, Monday morning, on my way to my modern hospital, I shall stop at the office of my lawyer. And I shall file for divorce . . . on the grounds of mutual contempt.”

I was proud. I was so proud of her, I was ready to cheer. But I kept quiet.

I saw in his face that she had hit him, and she had hit him hard. He was not expecting a divorce. He was expecting to control, to dominate, to be the big professor on the faculty for Chemistry, Biotechnology and Nutritional Science at the Norwegian Environmental and Biological Science University, with a corner office on the fourth floor and office hours limited—he did not like meeting with students—to three hours a week.

But now he was being told by his wife to drop dead.

Unsure of his next move, he stood up from his chair, glared at both of us, then stormed out of the dining room to his office, where he grabbed his briefcase. He slammed the front door. He slammed the car door.

And then he was gone, no doubt to his office in an empty building on Sunday evening.

“Good for you, Mom,” I said.

She looked at me, triumphant, but definitely shaken. “I should have done it a long time ago.”

“Well, there are a lot of things that all of us should have done a long time ago.”

“Hmmm.”

We sat there quietly for several minutes, finishing our dinners. She had a lot to think about, I knew. The lawyer in the morning. My brother Marius in his bedroom, totally oblivious to what had happened.

Me, I was the easy part. She and I were a team, forever.

And then, while I was clearing the table and she was rinsing the dishes—filling an empty time when we did not yet know what to do—her telephone rang. She pulled it out of her pocket and looked to see who was calling. Maybe it was him, at his office with second thoughts?

No, it was a little angel, who somehow knew that my mother needed to hear her voice.

“Lamar!” said my mother into the phone, her face lit with joy. “How are you, Sweetheart?”

Lamar, the little girl whom I had carried in my arms. Now living in Germany. Seven years old. We still had not seen her and her mother Loreen since Lesvos.

Lamar and her mother had learned to speak in German. But they had both learned as well enough English that they could speak to us once a month on the phone. Never mind that some German got mixed in. We could understand them, and they could understand us as we spoke English slowly and clearly.

My mother sat down in her chair, looking at me with happiness in her eyes as she spoke to the little girl who offered her such open friendship and love.

Eventually, she handed the phone to me and now I could listen with delight to the bright voice telling me about her adventures in Bremerhaven, which she liked very much. She had wonderful friends in first grade. She liked painting class. She liked to sing in German. Their neighbor had a wonderful cat.

Now my mother spoke with Loreen, and I heard, finally, the invitation which she had never been able to offer while her glowering husband had been around to dampen her every move. “Loreen, will you and Lamar come visit us in Norway this summer? Anna and I will pay for your tickets. I know an old hotel on the coast, right by the sea, where we could stay. The people who run it are my friends. There is even a small mountain nearby with a nice path right to the top. Lamar will climb it like a mountain goat, I am sure.”

She listened, she laughed. “Good, good! Yes, come in June, when school is over. June is a perfect time in Norway.”

I talked with Loreen, telling her how enormously glad I was that she and Lamar would be coming to visit us. Yes, bring sweaters. Yes, bring rain coats. Yes, bring boots. “Oh, we shall have the most wonderful time!”

My mother walked with me to the Ås train station, where I would catch the 20:50 to Oslo. She asked me if she could meet me at the White Caps headquarters on Monday afternoon, after my classes, after her day working with the premature babies, and after her morning visit to her lawyer. She wanted to congratulate Aili . . . and she also wanted, I knew, to spend some time with me before she headed back to whatever was waiting for her at home.

“Of course, Mom. Aili will be very glad to talk with you. She’ll ask you for advice, I’m sure.”

We could see the lights of the train approaching the station. How could I tell my mother, in thirty seconds, “Thank you for your strength. Thank you for protecting me from the monster. Thank you for believing in Aili. Thank you, thank you, thank you.”

I did manage to say, as the train slowed to a stop and the door opened, “Thank you for inviting Lamar and Loreen. I can hardly wait.”

“We should have done it long ago.”

“There are a lot of things which all of us should have done long ago. But now we did it.”

I gave her a hug, then stepped onto the train.

When the door closed, I waved to her through the window. She waved back, strong, resilient, happy, shaken.

The train began to roll, leaving her standing there alone on the platform in the darkness of early spring.

Chapter Twenty-One

During the six weeks between International Women’s Day on March 7, and Earth Day on April 22, 2020, close to a billion young people were out knocking on doors. Many of the 235 million young people in India, and the 225 million young people in China, rose to the occasion. They felt that they had a mission, first to educate each other—Aili’s film was shown so many times in so many places that it was called “beyond viral”—and then to educate the older population in their countries.

People who had never seen snow could now explain to each other the importance of the Arctic ice cap. They could discuss the sequence of events, each one triggering the next, from the melting of the ice cap, to the warming of the Arctic Ocean, to the warming of the winds, to the warming of the tundra, to the release of carbon dioxide and methane gas, to the wrapping of these new greenhouse gasses around the planet, to the warming of the world. *Their* world.

People in Pakistan and Ethiopia and Jamaica perhaps did not understand the geophysics, but they understood that the warming of the Arctic atmosphere affected the jet streams, which affected the weather in Pakistan and Ethiopia and Jamaica. People who lived on the continental coastlines and on small islands knew that the warming of the Arctic Ocean was causing glaciers to melt and seas to rise. Farmers understood that the fate of the polar bears was linked to the fate of their cattle and their crops.

During those six weeks, the largest educational campaign in human history . . . was just getting started.

Clean energy companies added to this campaign by promoting the clean energy grid. Thus while people were learning about the urgent dangers of global warming, they were also learning about the solutions which could reduce these dangers. The ubiquitous question became, “What are we waiting for?”

And the oil companies? They did not have time to hire expensive advertising firms to spread their lies. As more and more young people knocked on doors around the world—young people who wore the symbol of their generation, a white cap—the Oil Boys saw, very clearly, that their days were numbered.

* * * * *

The final global tally on our petition was 4.73 billion signatures, including the names of those who wanted to vote *Yes* in September, and those who were determined to vote *No*. These signatures were delivered to the capitals of the world.

The people who signed the petition now expected their heads of state, on Earth Day, to authorize the referendum.

Yes, we all knew that our vote in September would not be legally binding. But the voting itself, and then (hopefully) the positive results, would carry an enormous weight, especially for those who had voted. Following a summer of education, and a day of voting for a clean and peaceful world, the momentum of five billion determined people would be unstoppable.

We would be ready for the next step.

* * * * *

The University of Oslo law school did not cancel classes, nor did it postpone the examinations waiting for us in May. Thus Aili and I continued to put in the long days of classes, followed by a couple hours at the White Caps headquarters, followed by reading, in our student apartments, the interminable legal texts which we had to understand as preparation for classes tomorrow.

Nevertheless, Aili and I met five times for five rehearsals at Sognsvann, usually on a Sunday afternoon. My mother joined us, as did several of Aili's Sami friends. We would gather at a picnic table near the two piers at the far end of the lake, where we feasted on my mother's potato salad (my grandmother's recipe), and Sami reindeer stew with wild cranberries. We drank cups of hot coffee from our thermoses while we sat beneath the bare birches and looked out at the lake. Sognsvann was covered in March with old snow and rotten ice that we could not walk on, covered in early April with ice and open patches of blue-gray water, and covered in mid-April by sparkling blue-black water which announced that Yes, spring had arrived.

My mother now wore a red scarf over her shoulders, a gift from her Sami friends. I had of course told Aili about what was happening in my family, and she may have told her friends. They never said a word, but they wrapped my mother with their warm friendship and high spirits, and she flourished, laughing more at their jokes than I had seen her laugh in years.

Following our picnic lunch, we would walk out on the pier, where Aili would stand at the end, facing the lake, while the rest of us stood in a cluster just behind her.

She would speak to the lake, first from notes, then by the third Sunday, from memory, while we listened carefully. Yes, we could have heard her more clearly had she spoken directly to us, but we were not her ultimate audience. When she stood, on Earth Day, on the elevated terrace in front of the Norwegian Parliament, she would be speaking to an enormous crowd . . . and to the world. Thus she spoke to the broad expanse of the lake, to the green-black trees along the far shore, and to the sometimes gray, sometimes pale blue sky that reached, we knew, all the way up to the Arctic.

Because, you see, someone had to speak on Earth Day not to the world, but *for* the world. The heads of government, when they addressed their citizens at one o'clock in the afternoon, would speak of economic contingencies and political necessities. And then, hopefully, they would authorize the electoral process which would take place in September. But before the presidents and prime ministers and dictators had their say, one person, among the multitude of speakers who would address the crowds that morning, had to reach out to the algae and the diatoms and the pteropods and the krill and the herring and the cod and the seals and the bears and the whales in the north, and to the great rivers fed by mountain glaciers, rivers which offered their ample waters to the irrigated farms in the south. One person had to reach with her vision from the peoples of the Arctic—who had lived with their reindeer beneath the northern lights during the long winters, and beneath the midnight sun during the vibrant summers, for thousands of years—to the generations still unborn, in Africa, in South America, in New Zealand, who depended on us, on *us*, to make the right decisions, and to make them in time.

And so Aili spoke to the lake, to the forest, to the sky, while we listened. And on the fifth Sunday—a warm, sunny Sunday with a crystalline pale blue springtime sky—when she began to speak, her voice was strong and clear, full of confidence. Her Sami friends formed a half-circle behind her and began to *yoik*, quietly at first, then with growing strength. Their voices embraced her voice, encouraged her voice, as if not only they, but her ancestors all the way back to the ancient people . . . were bestowing upon her their blessing.

My mother took hold of my hand. I squeezed her hand as we listened together to the words, the phrases, the cadences that conveyed Aili's belief in the beauty and the sanctity of life . . . precious, fragile life, the gift which we must honor, the gift which we must treasure, and the gift which we must forever protect.

When Aili had finished speaking, the choir of Sami voices lifted with a final jubilant call up to the sky, the sky which wrapped around our planet—our Cradle of

Life—and then the voices diminished, until all we could hear was the lapping of the waves against the pilings of the pier.

Chapter Twenty-Two

On Wednesday, April 22, 2020, a working day, when all government officials would be at their desks, the citizens of 195 nations gathered around their Congresses and Parliaments in the capital cities of the world. Citizens gathered as well in the town squares and city parks throughout their countries, where they could see, on giant screens, the speakers in the capital cities who addressed them from ten to twelve in the morning, and their presidents and prime ministers and dictators, who addressed them at one o'clock in the afternoon. Those who could not attend these outdoor gatherings watched on their televisions, or their mobile phones. Of the 7.758 billion people who lived on planet Earth that day, at least 7 billion were watching.

As one o'clock on Wednesday afternoon rolled west around the planet, from the Republic of Kiribati (at two in the morning, Norway time) to Wellington, to Sydney, to Tokyo, some people stayed up all night to hear the news from nation after nation. People listened especially for the news from Beijing, from New Delhi, from Moscow.

The people of China, which had no direct oil interests in the Arctic, welcomed the creation of an Arctic Sanctuary as a means of reducing the unpredictable dangers of global warming.

The people of India welcomed an end to oil drilling in the Arctic, and thus an end to potential military confrontation, as a major step toward international peace.

The people of Russia, despite major oil resources in the Arctic, were willing to leave those resources untapped, and to support the creation of an Arctic Sanctuary where nations might cooperate in polar research . . . as long as *all nations* agreed to a halt in oil production in the Arctic, and to a halt in *all* military maneuvers. Russia reserved the right to reverse herself on this decision.

There was historic news. The Russians would join the global team, as long as every nation—especially the United States of America—joined the team as well.

We would have to wait for eight more hours to hear the news from Washington.

* * * * *

At eleven-thirty on Wednesday morning, Aili Biriita stood on an elevated terrace in front of the Norwegian Parliament, a dignified two-story building made of yellow brick, waiting to deliver her Keynote Address. She stood out from the other

people gathered on the terrace, who were dressed primarily in gray and black, because she wore her blue and red Sami *gákti* with a red scarf over her shoulders, and her white cap. In the bright morning sunshine, the blue and red dress was especially colorful, and the white cap was especially white.

Aili looked out at her audience: an enormous crowd filled the long rectangular park in the heart of Oslo. Giant screens had been set up throughout the park, as well as on the Oslo wharf, so that people could listen to the morning speakers, and then, hopefully, to the Prime Minister as well. The Prime Minister had been invited to address her citizens at one o'clock, before she, hopefully, signed the document authorizing the referendum in September.

My mother and I stood with a group of White Caps toward the front of the crowd. Even though I did not have to say a word today, my heart was thumping with anticipation. How much easier it had been to stand on the end of a pier at Sognsvann, than to watch Aili standing in front of the Parliament, her face impassive while she waited for a long-winded introduction to finally end.

The announcer now swept his arm toward Aili and stepped back. People clapped their welcome. Aili stepped forward with a microphone in her hand. She swept her blue and red arm toward her audience and greeted them, "Bures!"

Five hundred Samis scattered through the crowd, as well as over a hundred White Caps, called back, "Bures bures!"

Aili smiled and explained to her audience, "'Bures' means 'Hello.' I want to say 'Hello' both to you . . . and to an entirely new epoch in human history."

She paused, then she repeated, "An entirely new epoch in human history."

The audience was silent, listening.

"Never before have the people of Norway, especially the *young* people, worked so efficiently with the people of China toward a common goal. Not so long ago, in December of 2010, a Chinese dissident, Liu Xiaobo, was awarded the Nobel Peace Prize. The Chinese Foreign Ministry called the prize an 'obscenity', and the Chinese government greatly curtailed diplomatic contact with Norway. Trade between the two countries came to a halt."

Aili paused. Most of the people in the audience were familiar with this recent breakdown of political ties with China. She was starting her talk on familiar ground.

"Not until six years later, in December of 2016, did Norway and China normalize diplomatic relations. Norway can now sell her salmon to China. Liu

Xiaobo, however, died as a prisoner in a Chinese hospital in 2017, at the age of sixty-one.”

I could feel that people around me in the crowd were a bit restless. Where was this leading?

“During recent weeks, the majority of the people in China, over half a billion, have signed a petition asking for a referendum in September, a referendum which will enable them to demand a clean and peaceful future not only in China, but on all of planet Earth. Many of the people in Norway have also signed this petition, asking for the same referendum, so that they too can demand a clean and peaceful future. China and Norway no longer bicker over forms of government, over economic systems, over past grievances. Instead, we look for ways in which we can work together to stop the heating of our planet, to stop the pollution, to stop the plundering, so that we can bring temperatures down to the normal levels which have sustained life for millions of years. China and Norway can now discuss the creation of an Arctic Sanctuary, where the oil which poisons our world will be left untapped, unburned. Norway and China can now discuss an international clean energy grid, which we hope to build together, providing not only clean energy to our world, but a vast number of jobs.”

I could hear murmurs of agreement in the crowd.

“As our beautiful and fragile planet Earth rolls through the twenty-four hours of this historic day, enabling people to speak in the morning, enabling our political leaders to authorize the referendum at one o’clock in the afternoon, a multitude of nations are joining together to share that dream, that goal, that absolute necessity, of building a clean and peaceful world. Never before in human history have so many people understood the importance of the Arctic ice cap. Because if the time comes when that ice cap is gone, your morning cup of coffee will be gone as well. No coffee beans, no water. Gone.”

She paused. “Yes, on this historic day, hour by hour around the world, we rise up together with unprecedented determination to change the course of our great human journey, guided no longer primarily by profits and the bottom line, but by the welfare of life, *all of life*, on this fragile planet. The Arctic Sanctuary will be threatened for decades to come, perhaps for centuries to come, by the pollution which already wraps around our world. But as we bring that vital region of the world back to health, we give to ourselves the gift of hope.”

Aili Biriita encouraged us to believe that we *ourselves* could give to each other the gift of hope.

“We need, together, to harness the power of the sun, and the power of the wind. We need to teach each other, to learn from each other, to work together, to dream together, to build together, on behalf of the children who will inherit this world. We need to believe in ourselves . . . as we launch on the most exciting journey in human history.” She pointed up at the yellow-white sun, shining down from above the buildings south of the park. “That sun will bless us every step of the way.”

People glanced up at the sun. Yes, so much was possible in our world today.

Now Aili swept her arm toward her audience. “Norway, you have a special calling, a special mission. You have a long tradition of inviting students from around the world to study in your high schools and universities. And you have the world’s largest sovereign fund, comprised primarily of money which was earned from the sale of oil, oil which you knew would be burned. Yes, you have contributed significantly to the pollution which poisons our world today, and by doing so, you have become immensely rich. Perhaps you would consider using a portion of your wealth to enable students to study, in their own countries, two important subjects: Global Warming, the Problem, and Clean Energy, the Solution. Two serious, full-semester courses, with all the necessary teaching materials, in classrooms around the world. Now *there* would be an excellent investment.

“Perhaps Norway could lead a consortium of scientists who are experts in the field of climate change . . . to create professional teaching materials in a multitude of languages, which would be available online, at no cost, to schools around the world.

“Perhaps Norway could lead a consortium of engineers who are experts in the field of clean energy . . . to create professional teaching materials in a multitude of languages, which would be available online, at no cost, to schools around the world.

“If we could enable a billion high school and university students to learn from professional sources, and to do their own research, and *to share* their research with other students around the world, then the first global generation in human history will do more than collect signatures. They will build a network of educated young people working together to tackle the great challenges of the 21st century.

“Norway, reach out to the classrooms of the world. You will earn the gratitude of a growing number of young people, worth far more than your present bullion in the banks of Switzerland.”

Murmurs of approval and disapproval rippled through the crowd. She had touched on a subject of controversy.

“I would like, on this very special morning, to reach out to our neighbor in the east. We thank the people of Russia for their willingness to vote in the referendum in September. You have a long history of Arctic exploration, as does Norway. Let us join our forces to continue that tradition. I think that both our Fridtjof Nansen and your Yevgeny Konstantinovich Fyodorov would be pleased.

“But going a step further, I believe that though Russia values her oil resources in the Arctic, the Russian people value even more . . . a guarantee of peace. Since 1914, a little more than a century ago, the Russian and Soviet people have been through the upheavals and devastation of a revolution and two world wars, followed by the anxiety of the Cold War, and the total economic collapse of the 1990s.

“When the Wall in Berlin was torn down in November of 1989, and the borders were opened, the Russians offered their hand of friendship to their neighbors in the West. Gorbachev offered to reduce and even to eliminate nuclear weapons; Reagan agreed to some reductions, but clung to his Star Wars in space. The pushing and shoving slowly resumed between the two great powers, and a rare historic opportunity to build a strong and lasting peace . . . was lost.

“Today, we are offered a new historic opportunity. The challenge of building an international clean energy grid, which will require the cooperation of *every* country in the world, provides the opportunity for those of us in the West to reach out to the Russian people, offering not artillery and missiles along our borders, but wind turbine farms and solar farms. Clean energy is waiting to heat samovars on one side, and coffee kettles on the other.

“Let the sun and the wind bring us together. Let us beat the blades of our swords into the blades of giant wind turbines. Russia has a long tradition in ballet, in chess, in mathematics . . . and in engineering. Let us team up, Ivan and Erik, Svetlana and Inger, to see what together we can do.

“As we move away from oil, as we move away from military confrontation, as we move away from the international arms bazaar . . . the perpetual wars of the Middle East will finally end. And then Syria, and Iraq, and Afghanistan, and Yemen, and Palestine, and Kurdistan, and the Yazidi people on their sacred mountain—all of them digging out from the rubble of war—can power their schools and their hospitals with electricity from the international clean energy grid. From the *democratic* grid.

“Didn’t someone in Palestine about two thousand years ago talk about peace? Then let us declare today, and let us declare again in September, that the time for peace has finally come.

“Russia, the people of Norway, whose entire population could fit into the neighborhoods of Saint Petersburg, are grateful that over the centuries, we have always taken care of our Arctic cod. Let us continue to do so, while balalaikas and fiddles fill the feasting hall with their music of friendship.”

Aili paused. Let them think for a moment about Russia, and maybe a moment more later this evening.

Now she pointed over the heads of her audience toward some distant point.

“I would like, on this very special morning, to reach out to our neighbor in the west. We hope that the people of America will show their willingness, in about seven hours, to authorize the referendum in September. Norway and America share many traditions, vibrantly alive today in Brooklyn and Minnesota and Iowa and Seattle. Let us continue to nurture those traditions.

“The people of Norway will never forget that the arrival of American troops in Europe during World War Two resulted in the end of the German occupation of our homeland. The American flying fortresses, taking off from bases in England and bombing targets throughout Germany, ended our five-year nightmare, and gave us back our mountains and our sea.

“Nor will we ever forget America’s generosity after the war, when funding from the Marshall Plan enabled us to rebuild our factories, so that we could go to work and rebuild our country.

“During recent years, America has gone through a period of unrelenting turmoil. Groups of well-meaning people, including students who demand an end to the killings in their schools, find themselves blocked again and again by powerful, secretive, and often brutal forces who view the democratic ideals of America with contempt.

“We do not claim to understand the peculiar mix of evils which fester on American soil, but on this historic day, as the Earth rolls toward one o’clock in Washington, we reach out to the people of America with the hand of enduring friendship. We hope that you will join us today, and that you will join us in September. In early November, two short months after the referendum, you will have an election, which may or may not bring your entire nation crashing down in a civil war. We hope, fervently hope, that a new administration will be peacefully elected, and that it will abide by the principles of the referendum. We welcome you as we build our international clean energy grid, and we welcome you as we establish our Arctic Sanctuary.

“Martin Luther King once spoke in the Aula at the University of Oslo School of Law, upon the occasion of receiving the Nobel Peace Prize in December of 1964. Dr. King was the youngest person, only thirty-five years old, ever to receive the Peace Prize. Let us hope that another young American, perhaps even a Native American, will visit Oslo in the near future, bringing from her country a new spirit, a new hope, a new vision in the land which once announced to the world, ‘All men are created equal.’”

Aili now paused for a long moment, while fifteen Sami men and women, and five Sami children, wearing *gákti* of different colors, formed a half-circle behind her. Even my mother and I had not known that Aili would finish speaking today while her people sang a Sami *joik*.

My mother squeezed my hand as she whispered, “Perfect.”

Each of the twenty singers held a microphone. The children began to sing first, their bright voices reaching out to the audience in the park as if they were singing with great joy in the golden-red light of the midnight sun.

Now a woman’s voice wove among the others, as if the Earth herself were calling up to the heavens, “Look at me. I am blessed with *life*.”

Other women, and now the men, joined in, sending their ethereal, haunting voices out over the crowd, as if they were singing to mountains beyond the crowd, singing to the reindeer grazing on the upper slopes, singing to the snow on the ragged crest, snow lit pale orange by the midnight sun.

And now Aili Biriita began once again to speak.

“Let us reach deep inside of who we are . . . so that we can find the *best* of who we are. Let us find the seeds long dormant: seeds of understanding, seeds of curiosity, seeds of a pioneering spirit, seeds of a bold spirit, seeds of compassion, seeds of love. Let us plant those seeds, and nurture the small green sprouts.

She paused, while the singers cast their magic on the audience.

Then she called out to the crowd, “Let our great-grandchildren at the end of this century look upon our work, with admiration, and with gratitude, and with the resolve to carry that work further . . . into the next century. They shall build the Renaissance of the 22nd century, with roots that grow deep in the rich soil of the Renaissance of the 21st.”

Now she made her final request.

“My friends, when this historic day is over, close behind you the door to the old, and open the door, a dozen doors, to the new.

“And neighbor shall reach out to neighbor.

“Nation shall reach out to nation.

“So that together we can lift our faces to the benevolent sun, and to the boisterous wind, and to the bountiful seas.”

She paused, then swept her arm, encompassing all who listened.

“So that together we can work to heal the wounded Arctic, and cap again the planet with the great curving sheet of ice which has kept our world comfortably cool . . . since the very beginning of our long human journey.”

She paused.

“Honor the Creator . . . by honoring the creation.”

With her hands over her heart, she bowed.

“Ollu giitu. Thank you very much.”

Then she walked with dignity to the back of the stage, while the Sami voices, one by one, became silent . . . leaving the voices of the five children to fade like the voices of birds who vanish on the wind.

Chapter Twenty-Three

At one o'clock, following an hour of music and a picnic lunch, the Prime Minister of Norway emerged from the front door of the Parliament and addressed the crowd. She spoke about Norway's "oil adventure", about the profits which oil had provided, and about the great strides forward as new schools and universities, new medical clinics and hospitals, new roads and bridges had been built.

She acknowledged that "the times were changing, and we must change with them." She mentioned Statoil's recent ventures into offshore wind turbines.

Then she stated that she hoped the referendum "would lead to promising new ventures in the future."

An NRK television camera moved in for a closer shot as she sat at a table beside the speaker's podium and signed the document authorizing the Arctic referendum in September.

Then she stood and held up the document with a smile while the crowd cheered and applauded. She handed the signed document to a member of the Green Youth delegation.

With a final wave to the crowd, she disappeared through the large door back into the Parliament.

* * * * *

At seven in the evening Norway time, one in the afternoon in Washington, the President of the United States tweeted from his office, "I give my consent to the September referendum. Best of luck."

Part VI

The Largest Democratic Vote In Human History

Chapter Twenty-Four

And so it came to pass, that the world rolled into an entirely new epoch of human endeavor.

The peoples of the Caribbean gave us their blessing. The people of Canada gave us their blessing. The peoples of Mexico and the other Latin American countries all the way down to Tierra del Fuego gave us their blessing.

The Hawaiians reminded the world that they had once been a sovereign nation, and then they gave us their blessing.

The people of French Polynesia, a collection of 118 islands and atolls in the South Pacific, a long way from Paris and yet a part of the French Republic, gave us their blessing.

Now it was up to us, during the four months of May, June, July and August, to prepare 7.758 billion people for the next step. We had to make sure that when folks voted in September, they voted Yes, Yes, Yes.

* * * * *

I passed my exams in May. My father moved out of the house in May. And in June, Lamar and Loreen came to visit. Mother and daughter joined mother and daughter for a week at an old hotel on Norway's west coast, just north of Bergen. For the first time in my life, I felt that I was part of a real family.

During that summer of 2020, the world was in good hands. Because it was in many hands, primarily from five groups of people.

The first global generation in human history—over a billion young people—charged with the double responsibilities of not only organizing the referendum in 195 countries, but making sure that people voted in favor of the Arctic Sanctuary, became a tightly-knit generation. They emailed from Beijing to San Francisco, they skyped from Vladivostok to Rio de Janeiro, they sent pictures and YouTubes and music. They evaded the censors, they hammered the hackers. They taught each other, learned from each other, planned together, with such attention to detail that they might well have been preparing for a moon launch.

But no, it was something better than a moon launch. It would be the largest democratic vote in human history, a vote which would create the foundation for the far better world which they intended to build. They were the architects of their own destiny, and nothing was going to stop them.

The second group, coaching the young builders, guiding them, encouraging them, warning them, were the women who had fought their own political battles for decades . . . and who knew that the opposition could be very sneaky. Women who had launched the liberation movement in the glorious 1960s, and who had not given up the struggle ever since, kept a sharp eye on the Men Who Clung to Power, ever watchful for all their dirty tricks.

Yes, the women became like mother lions, fiercely protective of their young cubs. The old male lions growled and paced, but they could feel the ground trembling beneath their feet.

The third group sprang to life with a cohesion and a wisdom which reached much further back than the 1960s. The indigenous peoples of the world—from the Sami of the Arctic to the Maya of Central America, from the Oneida and the Sioux and the Apache and the Pueblo of North America to the Pygmies and the Maasai and the Samburu and the Tuareg and the Toubou of Africa, from the Hmong people of Vietnam to the Aborigines of Australia—they were all Keepers of the Land in the various regions where they lived on planet Earth. They knew the seasons, wet and dry; they knew the crops and when to plant them; they knew the ways of the animals who shared the land; they knew the medicines and where to find them; and they knew the harmony and respect which were essential for survival.

The time had finally come that their voices were welcomed, especially by the young people who were willing to learn from teachers in every corner of the world. The global generation was determined to build a democratic world, a healthy world, a prosperous world, a world in which every child had a future . . . and so they made sure that the referendum, with its voting booths, would reach every indigenous village from the Arctic to the Equator.

The fourth group surprised us all with their support in a multitude of ways. The clean energy companies of the world understood that their future was riding on the results of this referendum. If several billion people voted “to replace fossil fuels with

clean energy around the world by the year 2040”, then their pioneering industry, still in its early years, would be guaranteed financial support well into the 21st century.

Clean energy companies would be able to plan far beyond the next few years. They could build the offshore wind farms, especially the innovative *floating* wind farms, in the seas around the world. They could build the giant solar farms in the deserts of Africa, on the rolling plains of India, on the islands of the Caribbean. They could build the grid which would wrap around the planet with its web of clean energy.

And they could do so not in competition with each other, but in a coordinated effort to meet the needs of seven billion people who *welcomed* clean energy.

No more battling with the Oil Boys. No more struggling to convince the sleazy politicians.

Now *here* was the perfect market, promising steady growth, unprecedented numbers of jobs, a galvanizing of the global school system, transparent profits which would be equitably distributed, tax revenues which would bolster community budgets, and a product—a growing diversity of products—which would become increasingly efficient, generation after generation. All with the blessing of seven billion grateful customers.

So during that summer of 2020, the clean energy companies went to work. First and foremost, they blessed the efforts of the young people with their financial support. They *invested* in the entire electoral structure which would be needed in each country for the referendum in September, from media announcements to voting booths. And they invested in an international team of election monitors, “to assess the conduct of the election process on the basis of international standards.” There would be no lost ballots, no stuffing of ballots, nor any attempts to keep the voters from voting, in this crucial referendum.

The clean energy companies reached out to the indigenous peoples, offering them a voice—in many cases bounced off a satellite—to the world. The tribes were tired of oil companies who devastated their land and gave them nothing in return. They were tired of logging companies, mining companies, monocrop companies which not only cleared the land with chain saws, but hired snipers to silence the voices of protesters. If wind turbines and solar panels would free them from this plague of plunderers and murderers, then of course they would welcome their old friends the sun and the wind.

The clean energy companies, as entrepreneurs in a young industry, understood the need for education, not only for the students, but for *all* of those seven billion

people who would eventually plug into the clean energy grid. Thus the companies made five- to ten-minute YouTubes, in a growing number of languages, which explained how a wind turbine worked, how a solar panel worked, and how the sun and the wind could power a clean stove—which required no wood—in every kitchen in the world. The YouTubes explained how tidal turbines worked, how wave generators worked, how geothermal energy could be tapped, how biofuels could power a community heating plant.

The YouTubes explained as well how a growing number of jobs would be created—*professional* jobs earning a professional salary—and how new educational programs would train people for these jobs. The jobs would be open, equally, to women as well as to men; the school programs would be open to the girls as well as to the boys.

The clean energy companies made YouTubes by the dozens, not with subtitles but with narrators who spoke Arabic and Thai and Swahili, so that the people listening would know that *their own people* were speaking to them.

The companies sent their engaging and informative YouTubes to the enterprising young people of 195 countries around the world, and then the young people made sure that the films found their audience, from major cities to remote villages.

During those summer months, the largest educational campaign in human history . . . took another major step forward.

The clean energy companies did something else that summer, something which, as my mother said, we should have done a long time ago.

At their own expense—without waiting for dithering politicians to make their minimal effort—they set up wind farms and solar arrays outside of every refugee camp in the world, providing steady electricity to people who had gone for *years* without a light bulb in their tents, without safe heat, without a safe stove, without a hot shower, without a warm classroom, without street lights at night, without a lit sanitation station, without a charger for their telephones, without a fan in the summer heat, without the internet.

By doing so, these companies saw with their own eyes the appalling failure of their “civilized” nations to take care of the victims of hideous, unending wars. With the help of the sun and the wind, the clean energy entrepreneurs turned a spotlight onto the suffering which belonged back in the Dark Ages.

And then a visionary stepped forward with an idea which immediately made sense, and with the money to make it happen. We would not use paper ballots, which were expensive to print and slow to count. We would of course use electronic ballots, on a very simple laptop website which listed the three questions, each one followed by a box for Yes, a box for No. Click on your choice of language, click on the appropriate box, then click on the box labeled, “I have voted.”

The laptops in the voting booths would be registered, so that a vote from any other laptop would be automatically disqualified. Voters would have a voting code, which they would type in before they voted, so that they could vote only once. The votes would be sent to a monitored computer within each country, where they would be tallied throughout the day, and to an international monitoring site in Paris, where votes from around the world would be tallied. Should the national tallies not match the international tally, the monitors would be alerted.

This would not be the bumbling, stumbling election in Florida of 2000 when machines failed to properly count the paper ballots, and election supervisors failed to properly monitor the process, and politicians failed to live up to even the most minimal standards of honesty and propriety. No, this would be the referendum of 2020, when not only would votes be cast, but the highest standards of honesty and integrity would be maintained, around the world.

Such was the system offered to seven billion people by Allen Rusk, an energy visionary based in Silicon Valley, California, who also offered to cover the expenses of setting up and running this system. It made sense to the young people, it made sense to the women, it made sense to the indigenous peoples, for whom very little in this modern world made sense. It made sense to the clean energy companies, and it made sense to the White Caps. Aili was thrilled, and sent a letter of gratitude to the man who, as she said, “I very much hope to be able to meet one day.”

Allen Rusk had one stipulation: The refugees in their camps must be able to vote as well. “They, beyond all others,” stated Rusk, “deserve the right to build a better world.”

And the fifth group? Our valiant White Caps, who worked at headquarters through the summer as a central communications hub, so that a church group in Bolivia could contact an offshore wind company in Scotland. Or so that a school in Zimbabwe could contact a YouTube producer in Japan. We were the switchboard to the world,

open twenty-four hours a day, seven days a week. Send an email to a White Cap . . . and you quickly received a clear and complete answer.

On especially beautiful summer days, half of the industrious seventy-seven White Caps would go skipping off to Sognsvann, to swim in the cool, clean water that washed away the long hours of work, to feast at picnic tables on salads and soups and breads from around the world, and to swap stories about people in remote rainforest villages who wanted to be sure that they were registered to vote in September.

On the next sunny day, the other half would disappear to frolic at the lake.

* * * * *

Yes, if you just shuffle along through life, you might well believe that there are three groups of people in the world.

The aggressors, a small number of people who constantly stir up trouble so that they can make their devious profits.

The victims, a vast and growing number of people whose lives are shattered, devastated, and destroyed.

And the oblivious, the largest number of people, who are distant from the bombs, comfortable in their daily routines, and do not want to be bothered.

But there is a fourth group: the volunteers who are on a Greek beach at night, ready to help the refugees who arrive nearly dead in their little rubber boats. The professors who teach classes about human rights, and the students who take those classes. The people who gather by the thousands in the streets to protest—usually without success—against the next impending war. The people who welcome refugees into their countries, into their homes, into their lives, into their hearts. And the people who, during the summer of 2020, were setting up wind turbines outside the fences of countless dusty refugee camps, so that the people trapped inside could at least have a light bulb, a heater, a stove, and a fan.

Yes, if we are ever going to break free from the ancient scourge of war, we must enable that fourth group to keep growing and growing.

And we must make sure that the members of the first group are no longer allowed to run their filthy business.

Chapter Twenty-Five

Aili insisted that every White Cap take a vacation that summer of at least one week, “otherwise we will become nothing more than seventy-seven burn-outs.”

Thus it was that my mother and I spent a week with Loreen and Lamar at the magical Skjerjehamn Hotel on the west coast of Norway during the month of June.

* * * * *

Loreen and Lamar, whom we had last seen in the Lighthouse Refugee Camp on Lesbos Island two and a half years ago, emerged from the International Arrivals door at Gardermoen Airport, searching for us in the crowd. When my mother and I called to them, they spotted us and their faces lit with smiles. They looked healthy and well dressed, like all the other people in that modern airport. They were no longer at the edge of death, desperately fleeing from a hideous war.

Lamar came running toward me; I knelt and gave her a hug, squeezing with my arms the child whom I had once carried unconscious in my arms.

Finally we let go of each other. Still kneeling, I told her, “Lamar, you have grown! You look great!”

Her dark Syrian eyes were filled with a bright intelligence as she said to me, “Anna, we must get to know each other. All I can remember is sitting near a fire in a barrel, which was so warm and lovely, and you were sitting beside me. And, sort of, I remember a bowl of hot soup. That’s all I can remember.”

“Well, we are going to a wonderful old hotel by the sea, and we will have many adventures. We will get to know each other very well, I promise you.”

My mother and Loreen, after a long hug, were both in tears. None of us had realized, I think, how powerful the bonds between us were, though we had known each other only briefly on that night in another world, in another time.

We picked up their luggage, rode the express train into Oslo, hopped on the train to Ås, then walked to our car parked at the station and drove to our home in the suburban fringe of Ås, a nice, quiet, safe, tidy neighborhood where no one had ever been bombed.

My twelve-year-old brother Marius was home, though after he had said a polite hello to a woman and her little girl from some faraway country, he disappeared into his bedroom to immerse himself in his endless video war games.

Loreen and Lamar looked out the living room window at the rolling farmland that wrapped around this part of the town; the grass in June was about ten centimeters tall, deep green, well watered by the spring rains. In the distance were a large red barn, a white farmhouse, and an ancient oak tree, its heavy black branches tinged with pale green.

“How lovely,” said Loreen as she stared at this vision of Norwegian peace.

For the next three days, we saw the sights in Oslo, including the White Caps headquarters, where Adnan, our translator from Syria, explained what all of these people seated at their laptops were doing. My mother and I had of course explained our work to Loreen on the phone, but now as she saw the scope of what the White Caps were doing, she was deeply impressed.

She asked Adnan in Arabic, and then my mother and me in English, “Do you think you can stop the war in Syria?”

Adnan said something in Arabic, then he said to us in English, “Not just the war in Syria. *All* wars. Maybe not tomorrow. But that is our goal.”

At the end of the tour, Adnan gave both Lamar and Loreen a white cap. They wore their caps every day during the rest of their visit, for they wanted to be a part of “the team”.

On the next day, we joined the White Caps for swimming and a picnic at Sognsvann. The water in June was still chilly, but both Lamar and Loreen were determined to jump off the end of the pier into the cold clean lake, as if enduring a baptism into their newly adopted Norway. My mother and I of course joined them, the four of us shrieking and laughing as we splashed in the sun-sparkling water, then paddled toward the ladder.

During the picnic, Lamar and Loreen joined a family from Syria in singing a song from home. But Loreen sang for only a few seconds before she shook her head and covered her face with her hands. Lamar managed to sing with the other children to the end of the song, then she let herself be folded into her mother’s arms while they stared out at the lake, their eyes filled with undiminished grief.

As we rode the train all day from Oslo over the mountains to Bergen, Lamar and Loreen were fascinated by the mountain plateau above the tree line, where even in June, patches of snow covered the northern hillsides. At Finse, the highest point, the train stopped for ten minutes, enabling the four of us to step out of the car to stretch our legs and breathe the cool mountain air.

As the train descended through deep green valleys between jagged mountains, our guests marveled at the waterfalls, the rushing stream that ran beside the tracks, and the tiny farms tucked into the forest.

Our time in Bergen between the evening arrival of the train and the departure of the ferry was limited, enough to enable us to carry our bags beside the pond in the park in the heart of the city, to admire the houses on the steep hillsides, and to take a quick look at the fish market on the wharf.

Then we boarded the ferry and headed north up the coast, between mountains towering above the shoreline and islands reaching out to sea, while a golden-red sun shone over the water far to the west. We stood outside on the stern deck, bundled up against the wind, too excited to go inside the ferry where the air smelled of hot dogs.

After an hour and a half on the ferry—we took pictures of each other standing at the stern beside the sunlit Norwegian flag snapping in the wind—we arrived at fabled, magical Skjerjehamn, once a trading center for fishermen who sailed up and down the coast, now a secluded sanctuary by the sea with both an old hotel and modern lodging. The waves lap the pilings beneath the wooden floor of the dining room, once a shop where boats and their engines were repaired. On a sunny evening in June when the breeze off the sea had settled, we sat outside at a picnic table a few meters from the water, dining on fish soup and home-baked bread and mountains of potatoes bathed in garlic-butter sauce. A cold beer radiant in the red-orange sunshine, seagulls squawking as they sweep overhead, the taste of salt in the air . . . you know that life cannot get any better.

This was where my mother had brought us for a week together, the most special place she knew in all of Norway, as her way of saying “Thank you” to Lamar and Loreen for being so important in our lives. And as her way of saying, “We shall be friends forever.”

We stayed in the old hotel, in adjoining rooms with old-fashioned furniture, windows we could open to the air off the sea, and bunk beds. Lamar and I slept on the upper bed in our respective rooms, while our mothers slept down below.

The sunny weather blessed us day after day, not always the case on Norway's western coast. We explored the edge of the sea, looking for shells. We walked on the narrow road that wound inland through the hills. Best of all, we hiked the trail that led up and down through rocky hills and valleys, and ultimately climbed to the flat grassy peak of a small mountain.

We loved that mountain and climbed it five times during the week. Lamar scampered ahead like a mountain goat, calling back to us now and then with a voice that we could barely hear. I tried to keep up, but the law student had spent too many hours in class and in the library, trudging through thick tomes of litigation. Our mothers followed behind, waving to us when we looked back.

At the top of what we now called Mount Lamar, we swung off our day-packs and put on our jackets in the cool, higher elevation breeze off the sea. Then we found some perfect flat rocks where we could sit and have our picnic. The Skjerjehamn chef always packed twice as much as we could possibly eat.

Yes, savored those days. My mother, devastated more than she had expected by the wreckage of her marriage, and by her husband's unrelenting nastiness, was deeply happy to sit up on that eagle's perch and to look down at the tiny yellow speck of our hotel, at the coastline that reached far to the misty north and to the misty south, and out at the sea sprinkled with low gray islands. She was getting started again, into a new life, with a new sort of family, just the four of us.

And me, I was more exhausted than I had known after my first year in law school, and the exams in May, and the enormous, unrelenting work with the White Caps. I was surprised at how wobbly my legs were when I reached the top of the mountain; early in the autumn semester, I would enroll at the University gym.

My mother and I could not know the depth of the psychic exhaustion felt by two war refugees, who after we had met them that night on the beach, had spent almost a year in the cold, dirty, dangerous mud hole of Moria Camp . . . before they were finally allowed to travel north to Bremerhaven, Germany.

Only on the last evening in our peaceful, beautiful, idyllic sanctuary by the sea, did we learn how deeply, and permanently, the devastation of war reaches into the lives of the survivors.

* * * * *

While we were eating dessert at a picnic table out in the evening sunshine—warm apple pie with whipped cream on top—the two little girls from the family that ran Skjerjehamn, who had become good friends with Lamar, suddenly arrived at our table full of smiles. They invited Lamar to join them on the other side of the restaurant, in the sunshine but out of the wind, where they would blow bubbles that drifted out over the harbor. The three girls scampered off like three bunnies in a meadow.

My mother and Loreen were both drinking wine that shone bright red in the sunlight over the sea. My mother was saying something about the sailboats moored along the wharf—many of the guests sailed to Skjerjehamn, stayed for a night or two, then sailed on—when Loreen set down her glass, put her hands over her face and began to wail with a cry that cut through our hearts.

She stood up and walked across the wooden deck to its edge, where she stared down at the cold water with such anguish that my mother jumped up and grabbed her arm.

“Loreen, Loreen, Loreen,” cried my mother with an imploring whisper. “Please, tell us. Please tell us what happened.”

For, you see, we did not know. We had never asked . . . what had happened back in Syria during the war. What had happened to her husband? We did not pry. We had waited until Loreen was ready to tell us, if she ever did.

After her wails of grief had subsided, Loreen slowly calmed. Then she looked at us with eyes staring out of a nightmare, and told us, her voice broken as she got the words out, “They tortured him. They tortured my Nizar. They took him into the prison where they tortured every man until he lived in hideous pain. And then they let him die. We never said good-bye. He just vanished . . . into Assad’s torture factory.”

What could we say? How could we respond?

“And then,” she struggled to continue, “my mother and my girl Ranim, five years older than Lamar, were waiting in line at a shop for bread, when they were killed by one of Assad’s snipers. A grandmother and her granddaughter, killed by a sniper!”

I now understood that the survivors of war were like two people: they were the ones who were with us today, eating apple pie and drinking wine with friends, and they were the ones who were shattered souls from a time they could never forget.

Loreen had lost a daughter, Lamar's older sister. And Loreen had lost her mother, Lamar's grandmother. In all this time, neither one of them had mentioned the three members of their family who had been snatched away in Syria.

"I . . . I . . ." Loreen struggled to speak. "I have such a nice apartment in Bremerhaven, and a job in a bakery. Lamar goes to school. And we have such wonderful, wonderful friends here in Norway. You bring us to this place we never could have dreamed about. But . . ."

She shook her hands toward heaven and sent up a shriek that pierced the sky.

People were looking at us. A man walked toward us, clearly concerned, but I shook my head and waved him away.

And that is when Lamar and her two friends came back, full of giggles until Lamar saw her mother and understood at once that her mother had been remembering the man who had been the strongest, the gentlest, the kindest, and the most loving man who had ever walked on this Earth.

What could I do?

I knelt and asked Lamar, "Can I hug you, Sweetheart?"

She let me hug her, let me try to comfort her, to pour the love from my heart into hers, to show to some small degree that I understood her, until she said, "Anna, I need to be with my mother. I need to hold her."

I let her go, so that she could wrap her arms around her mother and be the child who now took care of the adult, not because of age or wisdom, but because she was the only one with any strength left to carry on.

Eventually, Loreen, stroking Lamar's hair, looked with bleary eyes at my mother and told her, "I'm sorry. We don't want to ruin our time together with you and," she looked at me, "your Anna. We are very grateful for all you have done."

"No," said my mother, "it is us, Anna and me, who thank you, Loreen. Thank you for telling us. Lamar said to Anna at the airport that she wanted us to get to know each other. And now we have started. Yes, now we have started."

We talked that night, we talked on the train over the mountains from Bergen to Oslo, we talked in our home in Ås during their last day with us, and I came to fully understand the barbarity that ravages our world, even today. The unthinkable cruelty which is part of normal life in so many places in the world. The violence inflicted upon helpless people by men, by *men*, who cling at all costs to their power.

When I returned to the White Caps headquarters later that June, and when I returned to the classrooms at the School of Law in August, I was no longer Aili's apprentice. I was ready now to stand beside her, shoulder to shoulder, fiercely determined to cleanse the world of the ancient filth, and to nurture, as she said again and again, "the *best* that is in us."

The four of us cried at the Oslo airport, but they were happy tears. We were more than friends for life; we were family now, forever.

Christmas in Norway, we told each other.

Let it be a Christian Christmas.

Let it be a Syrian holiday. My mother and I were ready to learn.

Let it be a time of peace.

Let it be a time of peace.

We waved to Lamar and Loreen after they had passed through airport security. Then they disappeared on their way to the gate.

Chapter Twenty-Six

On Saturday, September 12, 2020, the peoples of the world showed what they could do, if they got themselves organized and were determined to *do* it.

Arctic Referendum Day began on the west side of the International Date Line in the South Pacific, where people on the islands of Kiribati voted on the three questions, then proudly showed the world their purple thumbs and white caps.

Voting booths opened far to the north, in Kamchatka, eastern Russia (the first of eleven Russian time zones), and far to the south, in New Zealand. As the sun rose over Australia, Papua New Guinea and Japan, voting booths opened. People in Indonesia, the Philippines, Taiwan and China ate their morning rice, then went to the polling stations to vote. People in South Korea and North Korea, with a thirty-minute difference in their time zones, typed in their registration numbers on the voting booth laptops, clicked three times—proclaiming to the world their three choices—clicked on “I have voted”, then walked out of the voting booth and held up their purple thumbs for the television cameras and their cheering neighbors. Many of them wore white caps.

Voting booths opened, proclaiming a new day in countries where ancient cultures, ancient languages and ancient religions were rooted in the dynasties of a thousand years ago. The voting booths enabled the modern descendents to decide on this day what sort of world they and *their* descendents would live in for the next thousand years.

The peoples of the Middle East, so fractured, so battered, so exhausted, clicked three times, answering the questions in Arabic, Persian, Turkish, Kurdish, and Hebrew, as well as over twenty other languages and dialects, answering Yes or No with words used in the time of Mohammad, of Jesus, of Moses.

The peoples of Africa, above and below the Equator, voted their decisions on the fate of the Arctic ice cap. They knew that the melting ice would bring increasing droughts. They also knew that they were very tired of oil companies that plundered their young and struggling nations. Click, click, click.

The peoples of Europe, from the sunny island of Crete in the south to the snow-covered island of Svalbard in the north, voted on whether or not the time had come for a new Renaissance, a new Age of Enlightenment, a new Industrial Revolution, to transform the world.

The people of Iceland, who proudly spoke a language which had changed very little from the language that their Viking ancestors had spoken a thousand years ago, clicked three times on laptops powered by the geothermal heat of volcanoes. Some of them wore t-shirts with a picture of Thor holding up his purple thumb.

The people of Greenland, where the ice cap was melting at an accelerating rate, clicked three times, with the hope that their melting ice would not cause the flooding of cities, and in some cases, entire countries, around the world. They also hoped that they would soon be rid of the hated diesel generator, forever.

The peoples of the Caribbean clicked three times, hoping to end the monster hurricanes which battered their islands. They hoped as well to end the warming of their seas, and the acidification of their seas, which were killing their coral reefs.

The peoples of South America clicked three times, hoping to preserve the glaciers in the Andes which provided the water for their great rivers. Deep in the Amazon rainforest, people who had learned during the past summer how the Arctic ice cap affected their streams and their trees, clicked on the machines that would carry their voices out to the world.

People in Mexico and Central America clicked three times with the hope that the droughts would never come back. They clicked as well with the hope that the Aztec and Mayan languages, and the Mixtec and Zapotec languages, and the powerful spirits of those cultures, *would* come back to flourish in their land.

People in Canada clicked three times, hoping that their country, which reached far north of the Arctic Circle, could continue as the nation where refugees were genuinely welcome, as the nation where indigenous peoples finally flourished as equals, and as the nation where Churchill, Manitoba, on the western coast of Hudson Bay, would forever be one of the largest polar bear maternity denning areas in the world.

People in the United States clicked three times, with, as their national tally showed, a greater numbers of No's than in most of the other countries in the world. The nation which had once been the beacon of progress now clung desperately to the past, for oil had brought wealth and power, whereas the sun and the wind made no such promises.

People in Hawaii clicked three times, for they basked in the sun and faced into the cooling wind. Further, they had no need for Pearl Harbor to become once more a military target. Surfers guiding their boards on the curls of the great waves of the Ma'alaea pipeline off the coast of Maui often wore a white cap.

And finally, in French Polynesia on the eastern side of the International Date Line, where no one had ever seen a polar bear or an Arctic fox, but where the older people had witnessed, and had suffered from, thirty years of French nuclear testing, the people clicked three times, vehemently. Between 1966 and 1996, the French had exploded 193 nuclear bombs on two atolls, while assuring the Polynesian people—citizens of France—that the tests were not dangerous to their health, and would cause no ecological damage. The dangers of radiation were hidden from people who worked near the blast sites. Despite these reassurances, increasing rates of cancer and leukemia devastated the islanders.

Even when the United States, Great Britain and the Soviet Union signed the Partial Test Ban Treaty in 1963, prohibiting nuclear testing above ground, France refused to sign the document and continued testing in the atmosphere until the 1970s, when, relenting to international protests, it began to test underground *beneath* the Pacific atolls.

After a moratorium, France began to test nuclear warheads once again in 1995, triggering riots in Papeete, the capital of French Polynesia, where the victims of this endless folly burned down the airport. Finally in 1996, France stopped testing its *force de frappe* in the South Pacific. After years of litigation, only nineteen Polynesians had been granted financial compensation for their health problems.

Thus in September of 2020, the citizens of French Polynesia gathered at their island schools and voted, as their tally later indicated, to prevent military aggression in the Arctic, because they knew that sooner or later, the nukes would once again be knocking on their doors.

* * * * *

People around the world followed the results as the tallies were reported. Never before had the citizens of Uzbekistan or Chad or Bolivia or Laos paid much attention to election results in Kamchatka and Myanmar and Mozambique, but on that day, they were glued to their televisions and radios and internet news services. As the Yes's poured in, far outweighing the No's, the mood became jubilant, victorious, exultant. Yes, the peoples of the world were voting—in huge numbers—for an end to the oil, and for a genuine, unstoppable beginning to the global development of clean energy.

People were voting not for this or that tribe, nor for this or that religious sect. They were voting not for yet another dictator, or some smooth, manipulative politician. They were voting for Mother Earth herself.

People were voting for the Arctic ice cap. Of course, of course.

They were voting as well for an end to the wars, an end to the weapons, an end to the ancient hatreds. Turning toward the future, they voted for their young people, who clearly were ready to build a far better world.

Yes, and something more. As people watched the tallies coming in from nation after nation, they marveled at the peacefulness of the voting, even in countries where violence had been expected. Apart from the outcome of the referendum, the peoples of the world were proving to themselves that they *could* move beyond the guns and the bombs. Today, Arctic Referendum Day, they looked into the mirror . . . and they liked what they saw.

* * * * *

The world population in 2020 was roughly 7.758 billion. People 14 years old and older (eligible to vote in the referendum) comprised 76.24% of the population, or 5.915 billion people. The final global tally showed that 4.527 billion had voted: a participation rate of 76.53%. And of those who voted, 81% voted Yes, Yes, Yes. It was, as The New York Times called it, “a global landslide”.

The celebration was unprecedented. Only the end of World War Two had brought so many jubilant people out into the streets. In Russia, the old Babushkas who remembered the Siege of Leningrad stayed up late into the night.

In China, which had come so far so fast in the past few decades, people saw the referendum as a vindication of all their hard work: they would keep building their wind turbines, they would clean up their dirty air, they would not be dragged into some insane war with the belligerent Americans, and they would continue to show the world the unfolding greatness of their Chinese culture.

In remote villages throughout the world, indigenous peoples began to believe that they would survive. They would survive. Their homes would not be destroyed. They would survive.

Yes, and in the United States of America, people who had come originally from Ireland and England and Poland and Italy and Germany, people who had come originally from Africa and from Mexico and from El Salvador, and people who had

come across the Bering Strait ten thousand years ago from Asia, and who had thus been the original Native Americans, now held up their purple thumbs and told each other, “Let’s try again.” The referendum was an unexpected cleansing, washing away the old and beckoning the new, a mood which carried the nation toward the next election, only two months away.

* * * * *

My mother and I phoned Loreen and Lamar in Bremerhaven, to congratulate them. “Surely,” my mother said with confidence, “the war in Syria will soon be over.”

“Surely,” said Loreen, “the helicopters will never again drop barrel bombs on sleeping children.”

We had spent the day at the White Caps headquarters, savoring and celebrating our undeniable victory. We were still there at ten o’clock in the evening—one o’clock in the afternoon in California, where a huge Yes was overwhelming the shaky No in Texas—when the office phone rang and someone answered it and then called out to the boisterous crowd, “Aili, it’s for you.”

Aili, wearing her blue and red *gákti* and white cap, emerged from a cluster of Mother Tongues and took the phone.

The room gradually became quiet.

She listened to whoever was speaking at the other end of the line.

Finally she said, in English, “Thank you so much. Yes, I hope so too.”

She listened a while longer, then she said, “Yes, let’s talk again on Monday morning. You are right. Let’s get started.”

She listened.

“Yes, thank you so much for calling. We thank you for your support.”

Aili set the phone down in its cradle. She stared down for a long moment at the phone as if hearing again the voice which had spoken to her, then she looked up at us and smiled, almost laughed, when she discovered the multitude of faces riveted on her, waiting for the news.

“Who was it?” I asked.

“Victor Nevzorov, director of research on a Russian oceanographic vessel stationed at the edge of the Arctic ice cap. Now, in September, following the summer

season, the ice cap is at its minimum size. This year, he is stationed further north than he has been on any previous year, because the shrinking ice has set a new record.

“He phoned to congratulate us—not me, us, the White Caps—and to say that he has received word from Moscow, informing him that Russia welcomes an international effort to establish a sanctuary in the Arctic, where scientists can share their research, where oil will be left untapped, and where military activity will be kept to an absolute minimum.

“Victor told me that Russia welcomes this new day. He also told me that we must now wait for the election results in America.”

Aili paused, then she added, “Victor wants to talk further on Monday morning. Perhaps a Norwegian research vessel could join his Russian vessel, to share a toast to the memory of Fridtjof Nansen.”

Someone in the back of the room began to clap; the room was quickly filled with clapping and cheers.

Aili had said, on the stage of the University auditorium, and thus in her film as well, “Honor the Creator by honoring the creation.”

Yes, finally, we together were moving in the right direction.

We had reached a tipping point, not a tipping point in the permafrost when methane begins to escape in planetary amounts from beneath the rotting ice, but a tipping point in the people who lived on this fragile, beautiful, unique and precious planet. A tipping point . . . when finally enough of us cared, enough of us were willing to learn, were willing to respond, and were willing to help build a thousand tomorrows.

End of Volume I

Volume II

Launching a Renaissance

Part VII

Marius

Chapter Twenty-Seven

The people had spoken. They demanded a sanctuary capping the top of their planet, where neither oil nor war would be allowed. And where the fragile sheet of ice, which they now understood to be essential to their survival, would stop melting, and would begin to grow again as the world gradually cooled.

Yes, the people had spoken. For the first time in human history, the peoples of the world had voted on an issue urgent to all of them: how to build a far better world than the one they lived in today. They had woven their schools together, they had build their ever-growing networks, they had knocked on doors, they had learned from each other, they had voted . . . and now there was no going back. They had built a momentum that would carry them on to meet the next great challenges. They had created their global classroom, and they had created their global voting booth . . . all without firing a shot.

While the world rolled toward a new dawn, a new age, the old Keepers of the Power did not leave without a fight. Some held political power, and some held financial power, rooted in centuries of male dominance. Their resistance was fierce, often violent, for they could not imagine any other world than the world which they controlled and plundered for their own enrichment.

Their resistance sparked a resurgence of tactics which had been developed by Gandhi and his independence movement in India; and further developed by Martin Luther King and his civil rights movement in America; and further advanced by native peoples in their self-preservation movements in many corners of the world. The old Keepers of the Power, with all of their money and their guns and their guile, were met by unrelenting non-violence, a strategy brought to full fruition by billions of people whose greatest weapon was their demand for peace.

* * * * *

Aili Biriita was invited by the women of France, who had first proposed the Arctic Referendum, to help organize a conference which would be held in Paris in December of 2020. The conference would formalize the referendum into a detailed plan for the creation of a sanctuary in the Arctic. It would thus build upon the historic Paris Climate Conference of December in 2016.

Aili proposed that the majority of the delegates to the conference should come from two international groups: scientists and native peoples. This unprecedented combination would bring together people whose knowledge was based on modern research . . . with people whose knowledge was based on centuries of living in harmony with the land. These two groups could discuss what was best for the *living ecosystem*: for the land and the sea and the ice, and for every creature that lived there.

They would ask, What was best for the Arctic? (*Not* what would best serve the economic interests of people who worked in plush offices far to the south.)

Aili wanted, with the help of indigenous peoples, to develop the concept of legal rights for an ecosystem and the members of its community. If *life* is so precious in this universe, and at the same time so fragile, then *life* should have specific legal rights which protect it.

Because the algae which grows on the underside of the Arctic ice cap is the foundation for a vast food chain in the Arctic, then the algae should be legally protected. It had a *right* to live, and to flourish.

Because the bears and the whales which live at the top of the food chain were intelligent animals, about whom we understood very little, then these living creatures should be legally protected. They had a *right* to live, and to flourish.

Because the reindeer had lived on the tundra since the end of the last ice age, at least ten thousand years ago, *they* were the original settlers, the original native creatures, and thus they should be legally protected, and the land on which they grazed and bred and migrated should be legally protected. The reindeer had the *right* to live, and to flourish, on the tundra.

The people who had lived in harmony with the reindeer, and with the tundra and the rivers and the sea, for thousands of years, should have the legal right to continue living in their home, following their ancient traditions. These people had the *right* to live, and to flourish.

Scientists and Indigenous Peoples would meet in Paris for two vibrant weeks in December, learning from each other, and developing a vision for a sanctuary in the Arctic. They would also recommend a model for other sanctuaries around the world, where native peoples would live as the guardians of their precious ecosystems.

The French hosts accepted Aili's plan, and invited her to address the conference as the Keynote Speaker.

Chapter Twenty-Eight

One of the old Keepers of the Power was not an imperious head of state, but the self-proclaimed head of a family: my father. When my mother hired a lawyer and sued for divorce, claiming “mutual contempt”, he fought back, revealing himself as a vicious and cunning creature who refused to cease his attacks until a judge finally banished him. He was not upset because he was losing his family; he hardly knew who we were, though we had all lived under the same roof. He was upset because he was losing his position of power. He was top dog, and his purpose in life was to growl at the rest of us.

The question that my mother and brother and I asked again and again, as the Snake fully revealed his poisonous character, was, “Why is he so angry?” What caused this bitterness, this meanness, this belligerence? Why does he scorn us, control us, view us with such underserved contempt? Has he nothing else to do with his life than to go to war with the world?

What my mother and I did not fully realize, until my brother Marius emerged from his silence, was how consistently my father had tried to crush his son. Marius had vanished into the dark cave of his bedroom, where he watched endless hours of video war games, because he could not stand up to the father who criticized—quietly, with a hiss—a delicate boy who was easily hurt, easily crushed.

My mother blamed herself for not understanding sooner that her husband was secretly bludgeoning his son. But Marius, always a quiet child, never went to her for help. And he certainly never came to his older sister for help. He did well enough in school that his grades were always good—not great, but good enough—and thus his teachers suspected nothing. When he withdrew into the war games, and deeper into his usual silence, he was not unlike so many other boys whose lives were focused on video games. My mother thought that since he was only ten, eleven, twelve years old, he would outgrow the games. And so she waited, spoke gently to him, asked him about school, about his friends . . . and received his brief responses.

I was focused on my own adolescent life: my boredom with high school, the trip with my mother to Lesbos, my determination to get into law school, and then my growing—and soon almost overwhelming—work with Aili and the White Caps. I paid little attention to the boy who appeared at the dinner table, who showed no interest in anything that I was doing, and who then skulked off back to his bedroom.

As Marius told my mother and me later—when he began to emerge—he had listened to us talking on and on about “saving the world”, while he himself had felt utterly and eternally alone.

* * * * *

Our father moved out of the house just before the Norwegian national holiday, the Seventeenth of May, when we celebrate the signing of the Norwegian Constitution in 1814. We also celebrate the children, for the parades which march through the streets of every village and town and city in Norway are parades not of soldiers with rifles, nor of military vehicles with missile launchers, but parades of schoolchildren and their sturdy teachers. On the Seventeenth of May, Norway celebrates her precious children, and thus it was entirely fitting that our father moved out of the house where his children were growing up, and spent that special day . . . we never knew where. Perhaps he was analyzing data on his computer in his office in an empty building at the university.

Marius marched with his sixth grade classmates in the parade through the streets of our little town. As my mother and I watched from the sidewalk, she said quietly, “How nice to see him smiling.”

He told us at dinner that afternoon—the traditional family dinner which my mother and I had made together—that he and his friend Sigurd planned to ride their bikes tomorrow to Hvitsten on the fjord. He looked at my mother with a face filled with happiness, with expectation, as he asked her, “Would that be all right? We’ll take a picnic, and I’ll be back by six.”

It was as if the boy who had disappeared three years ago had finally returned, three years older, with the same quiet eagerness in his face.

“Marius, that would be wonderful,” said my mother, delighted. “You and Sigurd. I’ll make a picnic for the both of you.”

None of us noticed the Snake’s empty chair at the head of the table.

And so through the summer of 2020, while my mother and I prepared for the Arctic Referendum in September, we also watched, and savored, the emergence of a wonderful new member of our family. As Marius and Sigurd rode their bikes almost every day through the rolling farmland which surrounded Ås—often with a picnic at Hvitsten, a tiny village on the Oslo Fjord with an old wooden wharf—Marius

borrowed from Sigurd's innate self-confidence. His face became tan and his slouch (in front of a video screen) became a healthy vigorous stance, ready for the world.

My mother was especially heartened when Marius and Sigurd, tiring of the same old farm roads, took their bikes on the train to Sognsvann, and then disappeared on a bike trail into the vast forest which wrapped around Oslo. They returned that evening with tales about a little lake they had found, which had a perfect camping spot. With a bit of financial help from my mother and from Sigurd's parents, the boys bought camping gear and bike trailers, so that they could, in July, disappear into Nordmarka for two weeks. They camped at various lakes, swam by day under the hot sun and swam by night under the moon, cooked their meals over campfire, and became citizens of a forest world entirely their own.

When school started in mid-August, the two seventh-graders shared their homework as much as they had shared reading a map; the kid who had slouched in silence through fourth, fifth and sixth grades now flourished in the classroom. He especially liked biology—"the study of *life*"—as he liked to say, with the confidence and exuberance of someone who had just himself discovered what life was.

On Saturday, September 12, 2020, Arctic Referendum Day, Marius and Sigurd and their classmates were at the high school polling station with their science teacher, who was determined that her students should witness such an important event. That evening at dinner, Marius announced that he was going to get a group of biology students at the Ås middle school involved with the "Weaving of Schools" program which our White Caps had developed. He was interested in a marine biology project, and wanted—my mother and I were stunned by how deeply he had thought about his plan—to contact the students at the Paul Gauguin Lysée on the island of Tahiti in the South Pacific, so that the two schools could compare the health of the atoll reefs in French Polynesia with the deep-water coral reefs off the coast of Norway.

"Tahiti!" said my mother with surprise. Neither of us guessed that within eight years, at the age of twenty, Marius would be doing university research on the health of the Tahitian atolls as they were stressed by both ocean acidification and ocean warming. Nor did we guess that, having become fluent in French, he would meet a Tahitian law student, Meherio, who would become his wife.

Such was the very positive state of affairs when my father, the Snake, spat his first venom at us.

* * * * *

We had heard nothing from him during the summer, other than a short letter from his lawyer to my mother, notifying her of his new address, close to the university. My mother's lawyer wrote to my father's lawyer with a number of requests, but my father was slow to respond.

Then suddenly, on Wednesday, September 16, shortly after Referendum Day, my mother received a letter from my father's lawyer which stunned her, and enraged her. I was then living in my student apartment at Kringsjå, so she waited until I came to dinner on Saturday to share the news with Marius and me.

Following my mother's traditional *lapskaus*, a beef stew with fresh vegetables from the farms around Ås (Marius' favorite), and *sotsuppe*, a dried fruit soup with extra bits of dried apple (my favorite), she read to us the letter from the lawyer. The Snake had decided that the house should be sold, and that he should receive fifty percent of its value. He would like Sofia Ødegaard (he referred to her by her formal name) to put the house on the market immediately.

I could not believe it. Not only was the bastard trying to take away our home, but he was doing this through a lawyer, without even *speaking* to my mother.

I asked her, "Can he do that?"

She assured me, "No, he cannot make such a demand. My lawyer explained that decisions regarding property must be resolved in court. The judge has the final authority. Henrik *cannot* grab our home away from us. Please don't worry. I just wanted you both to know about your father's latest . . . maneuver."

She looked at Marius, who was staring down at the table, his face blank.

"Marius, please don't worry. Do not be upset. I have an excellent lawyer and we will fight Henrik every step of the way."

Marius stared down at the table, motionless, as if all the confidence, all the plans, all the dreams of reaching out into a new world, had just crumbled into wreckage. How could he possibly weave two schools together, one in Norway, one in French Polynesia, when he didn't even know where he was going to live?

"Marius," I said softly, "do you know why I'm a student in law school?"

We had never talked about my courses, or my motivation. We had barely talked about the trip to Lesbos, where I had carried Lamar in my arms. He had been deep in his dark cave then.

“Because,” I told him, “at some point you realize that when something is wrong, you’ve got to fight to make it right. You’ve got to *fight*. Just be glad that it’s the three of us together. You’re not alone. We’re going to fight him, *together*.”

Marius looked up at me, at our mother, with a new understanding in his eyes. “Before,” he told us, “I thought it was just me that he hated. Now I know that it’s all three of us.”

“It was never just you,” said my mother. “Before, he despised us one by one. Now he’s attacking the three of us together. But he’s made a big mistake, because . . . we’re a team.”

“That’s right,” I said. “We’re a team.”

Marius still had a bit of his summer suntan, but I could see in his eyes that he was very fragile. I did not know, yet, what our father had done to him, but the knife had cut deep, and the wound was far from healed.

“Marius,” said our mother, “this is my fault. I should have fought with him a long time ago. I should have put him in his place. But I tried to preserve some degree of peace in the family. I tried to accommodate. I even attempted, once, to suggest that he visit a psychiatrist, so that could get rid of what I called his ‘demons’. You should have seen his explosion then. You were both out of the house. He exploded with the worst rage I had ever seen.” She paused, remembering a time which no one else had ever witnessed.

“Nevertheless, I let him have his mean and nasty ways for far too long. But now, Marius, we are getting ready for the final battle. We, the three of us, are getting ready . . . to cut him out of our lives, completely and forever. So do not be afraid of a long, hard fight. Actually, I welcome it. I’ve been saving up for it, for years.”

Marius smiled, just slightly. “You know, now that autumn is coming and the bike riding and the camping will soon be over, Sigurd and I were thinking about enrolling in the Ås gym. It’s right behind the train station. Maybe it would be a good thing if Sigurd and I pump some iron together.”

“That’s right,” said my mother. “And maybe the Old Girl will join you. I’ll put a little iron into my fist.”

“Well,” I said, joining the team, “there’s a student gym at the University. With a pool. I remember how winded I was, climbing that little mountain at Skjerjehamn. I think it’s time the law student got out of the library four times a week, two in the gym and two in the pool. Because . . . I too have been saving up for this fight for a long, long time.”

Thus, through the autumn, when we met for our Saturday evening dinners, we compared our muscles. My mother was building up her biceps, and laughed that she would soon be ready to throw a powerful punch.

I started out by doing far too much too soon on the exercise machines, and was so sore that I could hardly walk for a week. I did much better in the pool. I did not need steel quadriceps, I needed stamina for the long haul.

Marius and Sigurd were the ones who could really strut. They were in their growing years, when their muscles were ready and willing to put on weight. Sigurd filled out in the chest, while Marius filled out most handsomely in the shoulders.

Poor old Snake. He had no idea what he was up against.

Chapter Twenty-Nine

While Aili was on leave from her fifth year classes so that she could work with her colleagues in Paris, I was embarking on my second year in classrooms far from the glamour of the Eiffel Tower. I did not mind, because I loved my classes. We were exploring Constitutional Rights, which gave me a completely new understanding—and respect—for the way Norway took care of her people. International Law reached out to the world, where modern legal systems were continually developing. And my favorite class, Human Rights, confirmed for me that I had chosen well to become a law student in that particular field. I was learning about the legal tools which one day would enable me to help people like Lamar and her mother, and many more who were trapped in war zones and refugee camps.

I liked my fellow students as well. They each had a purpose, a goal, which included a vision of a better world. We had lively discussions, both in class and in the cafeteria during lunch. No wonder I had been so bored in high school; I needed the challenge and the excitement of being with students from whom I learned almost as much as I did from the teachers.

Every afternoon, when classes were over, I would join the White Caps at their headquarters near the law school, where I entered a world filled with a different kind of energy. The White Caps were taking the global classroom to a new level. They were developing two full-semester courses: **Global Warming, the Problem**, and **Clean Energy, the Solution**. These two courses would be offered on three levels: grade school, high school, and college. The White Caps were working with teachers and researchers from throughout Norway who offered their expertise in various fields. Students from the University of Oslo helped to compile the information into the three levels of courses, with both texts and illustrations.

And *then* our Mother Tongues translated the texts and captions into a growing number of languages. They often recorded the texts with clear and lively voices, so that students in remote villages and smoggy cities could listen as if the teacher were right there in their classroom.

Thus the White Caps enabled schools with limited resources not only to prepare their students for the challenges of the modern world, but *to feel that they were a part*

of the modern world, part of the global generation that was designing an entirely new 21st century.

The White Caps were constantly expanding the online library, in a growing number of languages, so that students who wanted to pursue a specific line of research could find sources from around the world . . . in their own language.

The White Caps developed a list of speakers, some at conferences, some in classrooms, some on a research ship, some standing on top of a wind turbine at sea, so that students could join the discussion at the top professional level.

Clean energy companies contributed abundantly to the courses, to the library, and to the list of speakers. Some developed films which enabled the students to visit a solar farm in the mountains of India, a solar collecting tower in the desert of Morocco, underwater tidal turbines in the Bay of Fundy, and experimental kite turbines in the skies above California.

The White Caps had begun with their Weaving of Schools program, connecting students around the world, a program which was flourishing. Now they added the pair of courses at three levels, and the ever-growing library, all available online at no cost to the schools. Of course, anyone else could plug in as well: adult education classes, church groups, and study groups within small companies and large corporations. We were surprised and heartened when we discovered that a growing number of people in nursing homes—people who cared about their beautiful world—were following the online courses . . . and sending us their comments.

Our global classroom was constantly growing, continually evolving, as it brought the algae and the nukes to viewers in every corner of the world.

Chapter Thirty

The Snake did not wait long before he spat his venom once again at my mother. But this time, he did not threaten our home. He attacked the very essence of who she was, in a very ugly way.

She was at the hospital, working with the premature infants whom she loved so much, when the director of pediatrics appeared beside her during her morning inspection of the neonatal patients and asked if they could speak in her office.

My mother was surprised, and a little worried. The director was clearly upset about something serious.

In the director's office, with the door closed, my mother learned that the top director of the National Hospital had received a letter from her husband, Henrik Ødegaard, indicating that my mother was using "substantial quantities of drugs at home." He stated that she had tried to hide her use of these drugs, but that he had been aware of her behavior "for several years." It was time, he felt, "that the truth be told to the administration of the National Hospital, in order to protect the welfare of the patients."

The hospital director had shown the letter to the director of pediatrics, who now picked the letter up from her desk and offered it to my mother, who took it into her shaking hands.

She read every vile word. Then she handed the letter back to her director and said, "Anne Berit, like every other medical professional who works both day shifts and night shifts, I occasionally take a sleeping pill in order to get to sleep. Otherwise, I take Simvastatin for my cholesterol. And a daily vitamin. That's it."

She pointed with disgust at the letter, which Anne Berit laid back on her desk.

"What you have there is an attempt to libel me, an attempt made by a very sick man whom I am now in the process of divorcing."

Anne Berit shook her head with sympathy. Then she reassured my mother, "I know that you are not taking drugs at home. Anyone who works in a hospital can spot drug use immediately. My question is, How do you want us to handle this?"

My mother thought for a moment. "I can give you my attorney's name and address. Then you can send the letter directly to her. She can use it as evidence if we go to trial. I think . . . that Henrik has shown very clearly the sort of person he is."

Anne Berit nodded with agreement. “Good. The letter goes to your attorney, and there shall be no record of it in this hospital. As far as I am concerned, you are one of the best neonatal nurses we have ever had.”

“Thank you, Anne Berit. I am very grateful.”

“Fine. Now you go back to your ‘little angels’, as you call them, and you make sure they are getting just the right amount of oxygen.”

My mother said that her hands did not stop shaking until two hours later.

* * * * *

When our mother told Marius and me about our father’s letter, I was appalled. He was not only mean, he was vicious. He was not just a snake, but a wounded snake, and now he would sink his fangs into my mother in any way he could.

Marius, that Saturday evening at the dinner table, began to sink back into his silence. The blank look came back into his face. My mother reassured him that the letter would help us to fight Henrik in court. Her lawyer had even been *pleased* when she read it.

But Marius would not look at us. He seemed frozen, with a fork in his hand over his half-eaten dinner.

Abruptly he stood up from his chair and told us as he bolted from the room, “I want to ride my bike.”

“Marius,” called my mother as she stood up and followed him.

He turned and shouted at her fiercely, “I want to ride my bike!”

Then he was out the door and gone. Without his jacket. Without his reflective vest, despite the darkness of evening.

From the front step, we watched the red tail light of his bicycle disappear down the street.

Chapter Thirty-One

The women of the world made their next move. While the indigenous peoples of the world were working with the scientists of the world, designing sanctuaries which would help to heal the world; and while the White Caps were working with students and academics and clean energy companies to educate the world; the women were working with each other to eradicate one ancient instinct, and to replace it with another ancient instinct, and thus to free the world forever from the plague of war.

They asked the basic questions, “Does a woman have the right to live in peace?”

“Do her children have the right to grow up in peace?”

One would have thought that the answers would be Yes, and Yes.

But for as far back as human memory could reach, the answer had been “No”. The men could start a war any time they wanted. They waved their flags and honed their swords and beat their drums and marched off to battle. Tribe fought tribe, city fought city, empire fought empire, as if that was the only purpose people had on planet Earth. What else could real men do but kill each other?

Of course, they never bothered to ask the women if maybe there might be some other purpose for the miracle of life on one tiny planet.

So the women set up their websites and built their networks. They had two goals: one was to encourage a global discussion, reaching into refugee camps, reaching into villages, reaching into universities, wherever women wanted to speak and to listen. The other goal was to educate, and to plan: How do we get rid of these weapons? How do we get rid of these wars? And how do we enable Mother Earth to be the cradle of life that she was *meant* to be?

The women had two powerful weapons: their numbers and their pocketbooks. They had millions of gray-haired ladies on their team who had seen enough of the unrelenting folly of war. They had millions of young mothers on their team who wanted their children to live in a clean and peaceful world. They had sixty-five million refugees on their team, women, men and children, who were sick to death of war. They had millions of veterans on their team, who knew the butchery and the insanity and could never forget. They had millions of widows on their team, for whom the war never ended.

And they had Mother Earth—with all her strength and beauty—on their team.

In addition, they had their purchasing power, or *non-purchasing power*, which they put to good use. If the women of the world stopped buying everything but essentials—cutting back by perhaps by 20%—the world economy would suffer enormously. We (I say “we” because my mother and I quickly joined the movement) called it “going without”. No new clothes, no new telephones, no trips, no frills. Every day, we found something that we did not really need, and so we went without, for *peace*.

The young people joined us. Marius and Sigurd took the oath: no new clothes, no new gadgets. A trend began: young people wore green denim shirts and jeans, and often a white cap. High school classrooms filled with kids in green denim clothing, imported—they made sure—from factories around the world with certified good wages and healthy working conditions.

Every day, the kids found something they did not really need, and so they went without, for *peace*.

Stock markets became jittery. Politicians pointed fingers of blame. Store owners complained that we were hurting them unfairly. We explained that we could no longer live in the world as it was, and that on the day that all the wars stopped, we would be glad to buy a new sweater, a new hat, a new pair of shoes. So that we could celebrate.

Yes, when one billion, two billion, three billion women “went without”, we began to feel our strength. *Peace* became more and more tangible, a goal which we felt we could actually achieve.

From the referendum in September of 2020 to Women’s Day in March of 2021 was six months: six months to become stronger and stronger every day.

Chapter Thirty-Two

The third time that the Snake spat his venom at us, he may have intended to hurt my mother, but the real victim was Marius.

On a Friday morning in late October, Marius was sitting in his seventh grade math class when he heard a quiet knock on the classroom door. The door opened, the secretary in the administration office peeked in, then she said to the teacher, "Excuse me for interrupting." She searched the room, spotted Marius and told him, "Marius, when class is over, please come down to the principal's office. She has a letter for you."

Marius, as he told us later, was surprised. Why would the principal have a letter for him? Was he in trouble?

He looked at Sigurd, seated in the desk beside him. Sigurd shrugged. Then he whispered, "I'll go with you."

Dr. Sverdrup welcomed the two boys into her office. She invited them to sit at a small table, then she picked up a letter from her desk, sat at the table across from them and handed the letter to Marius. He saw his name, Marius Ødegaard, in his father's handwriting.

"Your father brought this letter for you this morning."

"My father? He was here at the school?"

"Yes, about half an hour ago. He stopped at the reception desk and said he had a letter for you. He gave it to the receptionist, then he went out the front door. He was here for less than a minute. The receptionist gave the letter to me."

Marius set the letter on the table, as if he did not want to touch it.

"Marius," said Dr. Sverdrup, "I have spoken with your mother about your present family situation. I know that you are going through a difficult time. So I thought that before you open the letter, we should talk with your mother."

She paused.

"We can phone your mother, to let her know about the letter, and to ask her what she would like you to do."

"She's at work. At the hospital."

"I know. But I am sure she would have time to speak with you."

Marius stared at the woman who was trying to help him. Dr. Sverdrup told us later that he was “the most lost child” she had ever seen.

She asked him, “May I phone your mother?”

He nodded, but said nothing.

Sigurd put his arm around his best friend’s shoulders.

Dr. Sverdrup stood up from her chair, picked her phone up from her desk and continued to stand as she tapped the screen.

“Hello, may I speak with Sofia Ødegaard in the neonatal ward, please?”

She picked the letter up from the table.

“Sofia, this is Vilbjørg Sverdrup. Your son Marius and his friend Sigurd are here in my office. You see, your husband visited the school briefly this morning, with a letter for Marius. We have not opened the letter. We thought we would speak with you first, for your guidance.”

She listened.

“Yes, the receptionist said that he was here for less than a minute. Perhaps you would like to speak with Marius.”

She handed the phone to Marius, who took it into his shaking hands.

“Mom.” His voice was utterly dead.

He listened, then he said, “All right.”

He looked up at Dr. Sverdrup and handed her the phone. “She wants you to read the letter to us. She wants to know what he says, so that . . . so that we can fight back.”

Dr. Sverdrup took the phone, then picked the letter up from the table. She said to Sofia, “Just a moment. We haven’t opened it yet.”

With a letter opener on her desk, she slit the envelope open, then took out the letter and unfolded a single sheet. She showed it to Marius, so that he could see the handwriting, then she read into the phone, “My dearest Marius. You will soon be a teenager, a young man growing up. I do not think it would be in your best interest to have your mother as your parent providing guidance. You need a man’s influence, if you are to succeed in this world. I am therefore filing in the divorce case for custody of you, so that you will live and grow up with your father, as is proper.

“Marius, I look forward to some wonderful times together. You know, I am very proud of you.

“With love from your father.”

Dr. Sverdrup handed the phone to Marius.

He listened to his mother telling him that his father was *not* going to have custody of him, that no judge would make such a ruling, and that Marius should absolutely *not* worry about this letter.

He said with a dead voice, "All right. Yes, Mom. All right."

He listened. "All right. I'll meet you at home at four."

Then he gave the phone to Dr. Sverdrup.

"Sofia, I think it might be a good idea if I make a copy of this letter, to keep here in my office. Just to be safe."

Then she smiled. "Yes, Sigurd is here. They are inseparable, you know."

Sigurd nodded. "Inseparable, and indomitable."

Dr. Sverdrup said good-bye, then laid the phone on her desk.

She said to Marius, "I fully agree with your mother. No judge in court is going to award custody to your father. This letter is simply further evidence against him."

Marius made a tiny sound, "Hm."

"Well, I think that maybe you might like a break from your regular classes today. Marius, I recently ordered a book for you, which has arrived in the library. It is a book by the great French oceanographer, Jacques Cousteau. It was his first book, describing his early adventures with an underwater breathing apparatus. What if you spent the rest of the day in the library, reading **The Silent World** from cover to cover? I think that Jacques Cousteau is just the person you need to meet."

Marius nodded. "All right."

"And you, Sigurd, I have learned from Miss Andersen that you are one essay behind in English class. Perhaps you could use your time in the library to write this essay?"

Sigurd nodded, guilty as charged. "Yes, I think that my time in the library could be very well used by writing this essay."

"Excellent. Marius, before you go home at the end of the day, please stop here at my office to pick up the letter. I shall put it into a large brown envelop, so that you do not need to touch it."

Sigurd suggested, "I can carry it for him. I can give it to his mother."

"Fine. And don't forget to have a good hearty lunch. With some apple pie for dessert. The chef has informed me that the apples are absolutely fresh."

Marius and Sigurd stood up from the table.

“Thank you, Dr. Sverdrup,” said Marius. “I . . . thank you too for the book.”

“You are absolutely welcome, Marius. Enjoy your day with Captain Cousteau.”

Sigurd led Marius out of the principal’s office and down the corridor to the library, where the librarian had **The Silent World** ready for Marius to check out.

The two boys sat beside each other at a table near a window looking out at the gray, misty October day. Sigurd wrote his essay, page after laborious page, in his notebook, while Marius read about the French sea explorer who wore a knit hat as he sailed on his research ship, the *Calypso*, with his crew of divers on the sunny waters of the Mediterranean Sea.

* * * * *

My mother phoned me during my lunch hour at the University to tell me about the letter. She asked if we could have our usual Saturday dinner together on Friday evening, tonight. She wanted to invite Sigurd to join us, since he was now clearly a part of the “team”.

“We’ve got to keep Marius strong,” she said. “I want us to have a nice, happy dinner together. He loves spaghetti. If you can make the garlic bread . . .”

“Of course.”

My mother was quiet for a long moment.

“Then, if you could spend the night, Anna, we could talk. After Marius goes to bed. It is becoming more and more obvious to me that Marius . . . may have been abused by his father. The thought horrifies me, but . . .”

I had more than once thought the same thing myself. How slowly families move toward the obvious truth.

“In any case,” continued my mother, “I will ask my lawyer to do whatever is necessary to file what is called a ‘temporary restraining order’ against Henrik. I want a judge to order that he cannot have any further contact with Marius . . . or with you. We absolutely do not want him dropping a letter off at the law school.”

The Snake could slither into our worlds, the hospital, the grade school, the law school, leaving his smears of poison.

“Thank you, Mom. I truly never want to see him again.”

“And I truly hope you never have to.”

Then she added brightly, “So, dinner at five with our two gallant lads?”

“Dinner at five with our two gallant lads. Thank you so much.”

As soon as my last Friday class at the law school was over, I hurried to the National Theater station and caught the train for Ås.

Walking home from the Ås station, I stopped at the Kiwi and bought a package of vanilla ice cream and a tube of caramel topping. Marius always insisted, for his birthday, on vanilla with caramel. And so it would be tonight.

* * * * *

My mother and I learned, during our festive dinner, that Marius and Sigurd had made plans to go camping this weekend at one of the lakes where they had camped during the summer. Then the letter had arrived, and they had completely forgotten about the camping trip.

It was Sigurd who mentioned it, when he suddenly asked, “Hey, Marius, are we going camping this weekend? The weather says drizzle tonight, but sunshine tomorrow. What do you think?”

“Oh, yeah,” said Marius with a smile. He turned to his mother. “Mom, this would probably be our last camping trip this year. Would you mind getting rid of us for the weekend. You could have a little peace and quiet for a change.”

His face was filled with the old happiness from last summer.

“Marius, I think that’s a great idea. You’ll take your bikes on the train?”

“Yeah, and all the gear. We’ll pick up groceries tomorrow morning, then catch the,” he glanced at Sigurd, “9:50 train? Or maybe even 8:50. That would get us to Sognsvann by 10:00.”

Sigurd suggested, “We meet with our bikes at the Kiwi at 8:00. We pick up the food, put the bags in the trailers, and we’re on the platform at 8:45. We can pack everything better when we get to Sognsvann.”

“Great.” Marius looked at my mother with a grin. “You two ladies will be all right without us?”

“Oh,” she said, “we’ll work on our knitting together. Don’t worry about us.”

We had our ice cream, then Sigurd said good-night and rode his bike home. He and Marius both wanted to get to bed early, so they could be up early.

Marius thanked us for “a great dinner”, then he went down the hall to his bedroom. He wanted to get his gear ready for the morning.

I looked at my mother. Her dinner had been a triumph. We had gotten through the entire evening without even mentioning the letter.

She and I talked quietly in the living room. We talked more deeply than we had ever talked before. She told me things about my father which I had never known. How he had been so charming when she first met him. How she would catch him, after they were married, lying to her (though she never let him know that she knew he was lying). How his temper flared more and more frequently. How, at first, he seemed to welcome a daughter, and then a son. But he became increasingly impatient with his wife, with his children. The joy, the love, the adventure . . . it was gone.

We heard Marius call “Good night!” from down the hall.

We called back, “Good night!” “Good night! Sleep well!”

And then, a few years ago—when Marius was nine years old, and I was seventeen—Henrik’s impatience became a growing meanness, a nastiness, which he directed toward all three of us. Had something gone wrong at the University? Was it the first sign of some mental illness? She had tried to protect her children from his sharp words. And she had tried, when we were out of the house, to talk with him about it. But he would explode into a rage, and she backed off.

“I should have talked with a doctor about him,” she said. “I could even have gone to the health authorities. They would have insisted that he come in for tests. But I . . . accommodated. I hoped he would get better. However, as I should know, sick people do not get better. They get sicker and sicker.”

We talked until almost midnight, then, suddenly very tired, we said good night.

I was in the bathroom, brushing my teeth, when she appeared at the door, her face filled with worry. “He’s not in his room.”

“Marius?”

“The bed is empty. His gear is packed, and his new book is on his desk. But . . . he’s gone.”

I looked into his dark bedroom. The covers were turned down. We searched for a note.

I checked outside. His bike was gone. Clearly, he had left the house without telling us. Something was wrong. Something was very wrong.

Despite the late hour, I phoned Sigurd. He answered sleepily, “Hello?”

“Sigurd, this is Anna. Marius has disappeared. Is he with you?”

“Huh, Marius? He disappeared? No, he’s not here with me.”

“His bike is gone.”

“He just left without telling you anything?”

“Where would he go?”

“Listen, I can be over there in fifteen minutes. I’ll leave a note for my parents, hop on the bike and I’ll be there. Then we can figure out how to plan a search. But why did he take off? How long has he been gone?”

“We don’t know. We just discovered his empty bedroom. Two hours maybe.”

“All right. I’ll be over as soon as I can.”

My mother phoned the police. Their headquarters were no longer in Ås; they had moved to Ski, nine kilometers away. They had one car out on night patrol. They would look for a boy on a bike, maybe on one of the country roads between Ås and Hvitsten.

Sigurd arrived, puzzled, worried. “But why would he take off without phoning me. We were supposed to get going early on Saturday morning. This doesn’t make sense.”

My mother sat at the kitchen table, trying to hide that she was frantic.

Had he heard us talking about him?

Would he try to hurt himself?

Was it the letter?

Yes, maybe he had heard us talking about him.

Should we get in the car and look for him? Drive to Hvitsten and back? Was he sitting on the old wharf, staring out at the water? Would he jump into the cold sea?

And then my mother’s phone rang in her pocket.

“Hello? Marius? *Marius?* Talk to me, talk to me. Are you there?”

“Mom.”

“My baby, where are you?”

I asked her, “Put on the speaker, Mom, so that we can hear.”

She tapped the phone. Now the three of us could hear the vague, strange voice that said, “Don’t let him take me, Mom.”

“Who, Honey? Your father? I told you that you are safe. He can never have custody of you. You are safe, Sweetheart. Marius, where are you?”

And then we heard a growing sound, coming closer, coming closer . . . The roar of a passing train filled the kitchen, while my mother shrieked into the phone, “Marius! Marius!”

We heard the train receding down the tracks.

“Marius!”

We listened . . . We listened . . .

“Mom.”

He was alive. Thank you, God. Thank you, God. Thank you, God. He was alive.

“Marius, where are you?”

His voice was weak, blurred. “By the tracks.”

“What tracks? Please tell me where you are.”

“South.”

“South of where? Ås?”

“Yeah.”

“How far south?”

“Two . . .”

“Two what? Two kilometers?”

“Two . . . hundred meters.”

“You are by the tracks, two hundred meters south of the Ås train station. Is that correct?”

We listened . . .

“Marius! Talk to me! I love you, Marius. I love you.”

We listened . . . to silence.

Was he hurt? Was he dead?

“All right,” said Sigurd. “Let’s go. You drive. I’ll take my bike. Anna, on the way, you phone the police and an ambulance. Tell the police to stop the trains. Tell them to stop the trains at Ski and Vestby. Now let’s go.”

Chapter Thirty-Three

We put on shoes and jackets. My mother grabbed her medical bag, the same bag that she had carried on Lesbos. I grabbed a flashlight from a kitchen drawer. We were out of the house in less than five minutes.

Sigurd had already left on his bike. We would meet at the Ås station.

The night was misty; my mother turned the wipers on as she drove as fast as she dared on the wet street. The neighborhood was asleep, the houses dark with an occasional night light on a porch. Outside the car, everything looked so normal. Inside the car, I phoned the police in Ski. They told me that they had already been alerted by the railroad: the engineer of the last train had spotted a body beside the tracks, just south of the Ås station. Both a police car and an ambulance were on the way.

I told my mother that the train engineer had spotted someone near the tracks. I did not tell her that he had spotted a body.

She gripped the wheel as she stared through the wet window into the misty night.

Sigurd was at the station when we arrived. My mother parked in the empty lot, grabbed her medical bag, and then the three of us, Sigurd wheeling his bike, walked quickly along the platform toward the southern end. The round clock on the station read 1:05.

We spotted Marius's bike in the dim glow of a platform lamp, leaning on its kick-stand, unlocked, dark red and wet in the mist.

At the end of the platform, a chain-link fence about two meters tall divided the tracks from a gravel trail that followed parallel to the tracks. Sigurd suggested, "I'll ride ahead on the trail to see if I can find him. You walk on the stones beside the tracks. But keep an eye out behind you. Even with this mist, you'll see the lights of a train coming."

My mother, who hadn't said a word since we left the house, silently nodded, then she climbed down the dark concrete steps at the end of the platform.

"Mom, take the flashlight." I clicked it on and handed it to her.

She took it, then shone it ahead as she walked as quickly as she could on the sloping rocks beside the tracks. I followed her, while Sigurd raced up the trail on his bike.

Walking beside the tracks on the sloping rocks was too difficult. My mother glanced back, then stepped between the rails and walked on the level concrete ties, staring ahead. I followed a bit behind, glancing back often toward the receding misty glow of the station.

We had walked no more than a minute when we heard Sigurd's voice calling, "Here he is."

My mother walked as fast as she could, almost running on the ties and uneven stones between them. The flashlight caught the reflective stripes on Sigurd's yellow vest. Now she shone the light on the red jacket of her son, lying in the grass beside the fence at the bottom of the sloping rocks.

"Marius!"

He was unconscious, perhaps dead. She knelt beside him, set down her bag, held the flashlight on his pale wet face while she laid her hand over his forehead, then opened one of his eyes. She knelt lower, her ear at his mouth.

As she handed me the flashlight, she said, quietly, firmly, "He's still with us."

She opened her bag and took out her stethoscope, then unzipped Marius's red jacket, pulled up his shirts and listened to his heart . . . as she had listened to Lamar's heart on the dark rocky beach on Lesvos.

"You're a fighter, Marius. You're a fighter. You just don't know it yet."

I noticed, in the glow from the flashlight, something in the grass. Picking it up, I saw that it was a bottle of sleeping pills. Empty. "Mom, look."

She took the bottle, read the label. "Contents: forty."

"Is forty a lot?"

"Yes, a lot. But not so much that we'll lose him."

I shone the light around in the grass and quickly found his gym water bottle, empty, and his telephone. Nothing more.

What on earth had he been thinking?

As my mother took off her coat and laid it as a pillow beneath Marius's head, we heard a siren approaching in the distance on the road from Ski. Two sirens. Police and ambulance.

Sigurd said from the other side of the fence, "I'll ride back and meet them at the station." He raced off on his bike.

And so it was the three of us in the misty dark, my mother stroking the wet face of the son she had almost lost, the son who had fled from some dark secret by wishing

himself gone forever, and the daughter who held the light in her trembling hand and loved the two of them more deeply, more fiercely, than she had ever loved before.

* * * * *

The police and the ambulance crew were magnificent. Two police officers, a man and a woman, came running up the tracks with their boots and bright lights. A short distance behind them, three ambulance medics in yellow reflective outfits, carrying equipment, walked at a rapid pace, also with bright lights. Sigurd was not with them; perhaps he had stayed at the station to meet anyone else who might arrive.

I spoke with the police, explaining who we were and what had happened, while my mother showed the empty bottle of sleeping pills to the medics. Then she stood back and let them examine Marius.

I asked the police woman if the trains had been stopped. She confirmed that they had been told to halt at Ski to the north and Norby to the south. We were absolutely safe here by the tracks.

Norwegians often refer to their country as “little Norway”. As if we didn’t count for much in the world. But that night, as those five professionals did their work so swiftly and competently, beside tracks that were “absolutely safe”, my little Norway was the greatest country in the world.

The medics lifted Marius onto a stretcher and wrapped him with a blanket. The two stretcher bearers carried him between the tracks toward the station at a rapid walk. My mother watched them until they disappeared into the misty dark.

The police searched the grass and the tracks, but found nothing more.

I held my mother’s hand as we walked side by side between the rails toward the station.

“Something triggered him,” she said. “When he was back in his bedroom, packing for his camping trip, something triggered him.”

“Was it us? Did he hear us talking?”

“No. We would have seen him if he had come down the hall. Our voices were too quiet for him to hear from his bedroom. Something happened, and then he slipped out the back door.”

“Was it the letter?”

“No, Sigurd brought the letter home from school in a brown envelope and gave it me. I put it into a folder with all of the divorce papers, filed in my desk.”

“Well then, we’re going to have to wait for Marius to explain what happened.”

My mother squeezed my hand. “I should have asked him a long time ago . . . what happened.”

“Mom, there are a lot of things that we all should have done, a long time ago. Just be glad that he’s with us now.”

“Yes, Anna. He’s with us now.”

Before we arrived at the station, we saw the swirling red light of the ambulance as it raced up the road toward the hospital in Ski.

Chapter Thirty-Four

My mother, Sigurd and I rode together in her car to the hospital, all three of us quiet, deep in our own thoughts. We were able to peer into the emergency room, where Marius lay in a blue hospital gown on a bed beneath bright lights, still unconscious. The doctor working on him looked at my mother and nodded his reassurance that all would be well.

After half an hour, a nurse told us that Marius was stable and would be sent to a room upstairs. He would probably not wake up before noon. If there were any complications, the hospital would phone us.

We drove back to Ås, relieved and exhausted. We stopped at the station, so that Sigurd could fetch his bike and ride home, and I could ride Marius' bike home. We promised Sigurd that when we heard any news, we would phone him.

I put Marius' bike in the garage, then went into the house and found my mother in the kitchen. She surprised me when she asked if I would like a glass of wine.

"To celebrate," she said.

She lit three white candles on the kitchen table, poured two glasses of red wine, then she sank into her chair like a person who had been drowning but had managed to reach the safety of shore.

I sat down as well, and wondered if I could ever be as strong.

We raised our glasses of red wine, lit by the three candles.

"To Marius," said my mother.

"To Marius," I said, "and to his valiant mother."

We clinked our glasses.

She thanked me with her eyes, and then we drank the wine that celebrated the victory of life in a very fragile world.

* * * * *

The hospital phoned at two o'clock on Saturday afternoon. Marius was awake and eating lunch. We were welcome to visit him.

We phoned Sigurd, picked him up at his home, then drove on the road which curved through forests and farmland to the town of Ski, busy with shoppers and traffic on a Saturday afternoon. In the sunshine, we followed the same road to the hospital which we had followed the night before in the dark mist.

We found Marius sitting up in bed, eating a *skolebrød*, a custard bun. He looked happy to see us, but also embarrassed.

He said quietly, "I'm sorry, Mom."

She sat on the edge of the bed and touched her fingers to his cheek. "Don't be sorry, Marius. Just tell us why."

He did not hesitate to tell us, "Because he phoned me."

"Who phoned you?"

"The Snake."

She was stunned. "Your father phoned you? When?"

"Just as I was getting ready to go to bed. He said that I should come live with him. He said that living with you was not good for me."

Marius closed his eyes, clenched his eyes, then he shook his head and cried out, "I couldn't get rid of him. I couldn't get rid of him! I've tried so hard to stay away from him."

He stared at my mother, desperate. "I shut off the phone. But I went . . . crazy. I already had the sleeping pills. I already had a plan. I would swallow the whole bottle, then lie down on the tracks. But . . ."

He gripped her hand.

"I was still awake when I saw the lights of the train coming. I had to crawl to the tracks. Or phone you. So I phoned you."

My mother wrapped him in her arms. "You phoned me. You phoned me. You phoned me."

Yes, he phoned his mother. And then the pills put him to sleep, safe and alive in the grass beside the tracks.

Sigurd gave his friend the book by Jacques Cousteau. "I thought you might like something to read."

I gave my brother an envelope with his name on it. He took out the sheet of paper inside, unfolded it and read, "This voucher is good for one round-trip ticket to Tahiti. The atolls are waiting."

"Hey, I want to go too," said Sigurd. "I've heard about those Tahitian girls."

We never asked him what happened with his father, years ago. We suggested to the doctor that he not ask him. If, in the future, Marius wanted to dredge all that up, then fine. But for now, my mother would protect him from the Snake with a

temporary restraining order, which became a permanent restraining order when the divorce went to court in late November.

The Snake was not to have contact of any sort with Marius, or with me, or with our mother. One phone call, one letter, and we would notify the police.

Marius spent five days in the hospital, in the care of an excellent counselor who did not probe into his past, but trained him to see all the positive options in his future.

He missed a week of school, but he was greatly cheered when, on Monday afternoon, his Oceanography Club came to visit him with balloons and ice cream.

When he returned to school the following Monday, he signed up for Elementary French. Never mind that the other students already had a two-month start. He had a natural gift, his teacher said, for proper pronunciation.

He rolled his rrrr's beautifully.

Part VIII

Paris

Chapter Thirty-Five

Paris was a thousand times more than I could possibly have imagined. Paris is more than a vibrant city; it is more than magnificent museums; it is more than cafés right out of a movie. Paris is a place where simply walking along a boulevard makes you feel more alive. Paris is a place where the paintings of the Impressionists remind you that the human spirit can suddenly delight the world with something entirely new. Paris is a place where century after century of paintings in the endless rooms of the Louvre, and where century after century of architecture around every street corner, remind you that every century, even the one we now live in, is *waiting to be filled* by marvels of the human spirit, of human ingenuity, and of the human love for beauty.

Paris is a place which says: Look how much we have accomplished in the past two thousand years. Now let us help you to take a step further, a step, perhaps, into the Renaissance of the 21st century.

Thus Paris was the perfect place for the scientists of the world to meet with the native peoples of the world, as together they tried to heal the world. Old Voltaire would have joined in the discussion. René Descartes would have reminded us, “I think, therefore I am.” Simone de Beauvoir would have encouraged the women scientists (roughly half the group) as well as the indigenous women (roughly half the group) to think in ways that were entirely fresh, innovative, and bold.

Aili Biriita flourished in this setting. For two weeks, she and thirty other Samis from Norway, Sweden, Finland and Russia met in conference rooms and cafés with scientists who had come from their universities and research institutes around the world because they knew that this Arctic Sanctuary conference was going to be the cornerstone of a new epoch. It *had* to be. Or we were not going to survive the next fifty years.

Aili and her fellow Samis met as well with the ancient peoples who had endured through centuries of modern madness, and who now had their opportunity, finally, to share their skills and their wisdom with people who would listen to them.

Scientists who had battled with small-minded politicians and deceitful oil companies for the past forty years now savored the opportunity to discuss the urgent problems with intelligent people who had lived on the tundra, on the Arctic coast, on the Australian desert, for thousands of years, and who thus brought to the discussion a completely different and thoroughly viable viewpoint. The scientists enjoyed *learning* from people for whom the weather was not something you shut outside the door, but

something you lived with every day, and thus lived with intimately. There was a reason *why* the Sami had so many different words for snow, and now the scientists wanted to learn those words, and the reasons for them.

Clearly, no weather station installed on the Arctic coast of Russia or Alaska or Canada or Norway was ever going to provide the detailed information about weather and climate that the elders of the Arctic peoples were able to provide.

The two groups quickly became one group of interwoven experts, their lively discussions facilitated by a throng of translators. The meticulous French hosts provided *gourmet cuisine* and excellent coffee, so that discussions continued well into the evenings. People had brought their own musical instruments, so that every evening was graced with songs from a dozen indigenous villages, as well as Cuban salsa, Chicago blues, and jazz piano from Aberdeen, Scotland.

The *Penseurs* (the Thinkers), as they came to call each other, after the sculpture which many of them had seen at the Rodin Museum, extended their vision beyond the Arctic Sanctuary, to a network of sanctuaries around the world, greatly increasing the amount of land already protected as parks. Patches of increasingly healthy land, maintained by the people who had lived there for centuries, would gradually spread their health to the rest of the damaged planet. It was a medical prescription for a century-long cure. Each sanctuary would host both research stations for scientists, and schools for students who would visit for perhaps a month, perhaps a semester. The students would of course take the fresh, innovative, and bold ideas home with them.

The sanctuaries would be woven into the international clean energy grid, so that together, symbiotically, they would cool the planet and thus enable the Arctic ice cap to grow to its former size, able to do once again the job it had done for three million years.

The two week Arctic Sanctuary conference ran from Monday, December 7 to Sunday, December 20, 2020. On that final day, the 300 delegates would present their vision of **A Healing World** to the peoples of the world, by global television and streaming internet. Without going into detail, they promised that their presentation would not be “the ordinary science lecture”. Nor would it be “a pompous political speech, filled with empty promises”. It *would*, however, be a blueprint that would provide at least eleven million new jobs by the year 2050.

Aili Biriita invited me to join her for the second week of the conference, and especially for the final day. My mother, newly divorced at the end of November, announced that she was going to celebrate by inviting me and Marius, as well as Loreen and Lamar, to spend a week in December in Paris. Marius was thrilled. Now, after only one month of classes, he could “practice my French.”

We took the train to Bremerhaven, Germany, where we spent two days with Loreen and Lamar, exploring their new home and meeting their friends. Then the five of us rode the train across the French countryside to Paris, where we booked into an old hotel with a classic cage elevator right out of a movie.

Aili Biriita met us on our first evening at the *Place Pigalle* Metro stop. I had never seen her so radiant, so full of confidence, as she told us about the first week of the conference. She took us to a restaurant with a band and a small dance floor, then helped us to order dinner and wine. Marius insisted on ordering his own dinner without any help; the *garçon* was very pleased with the efforts of this young man from *Norvège*.

Our red wine arrived, a bottle of *Boujolais villages*, Aili’s favorite. The six of us raised our glasses with a jubilant toast, “To Paris!” Marius sniffed his wine before drinking it.

I proposed a second toast, “To the Arctic Sanctuary!”

Aili raised her glass toward me and said, “*Merci beaucoup, Anna.*”

Lamar, seven years old now, raised her glass of grape juice and chirped, “*Merci beaucoup!*”

And then . . . a dashing handsome Frenchman appeared beside my mother’s chair and asked her if she would like to dance. He held out his hand.

Without hesitation, my mother stood up, took his hand and let him lead her to the dance floor. I had never seen her so radiant, so full of confidence, as she swirled around the floor with astonishing grace.

They danced a tango, and then a waltz, while the rest of us drank our wine and marveled. When the band took a break, her partner brought my mother back to the table, where she introduced him, “This is Bernard.” He did not try to join us, but kissed my mother’s hand, bowed to us at the table, then returned to his own table in a dark corner where he sat alone.

“*Maman!*” said Marius with a grin. “Where did you learn to dance?”

“Oh, the Old Girl still has a few tricks,” she said, then she sipped her wine.

* * * * *

Aili was busy at the conference during most of the week, so Marius, with a guidebook he had bought, showed us the sights.

He took us on a wintry December morning on a lovely walk beside the Seine—glittering now and then as the sun peeked through heavy gray clouds—to a museum on the Left Bank called *L'Orangerie*, a building which had originally housed exotic orange trees in the Garden of the *Tuileries*. Two long oval rooms now housed Claude Monet's water lilies, painted on eight curving canvases that wrapped around the walls of the two rooms. We did not stand in front of a painting, but walked beside it, as if gliding in a rowboat through the big white blossoms.

After a café lunch of *croque-monsieur*, sandwiches made with boiled ham and *Emmental* cheese, (Marius ordered a side of asparagus capped with a fried egg), and coffee so strong that Loreen ordered a second cup, Marius took us to our second museum of Impressionism, the *Musée d'Orsay*, housed in a *Beaux-Arts* style railroad station. Here I discovered the masterpieces which I had admired in a book in the high school library; they were almost old friends, but here in Paris they were *real*. I stood for a very long time in front of Vincent Van Gogh's self portrait, a deeply honest picture of a man both tortured and gifted; I could almost have wept for him, for he gave us so much beauty. His "Starry Night Over the Rhone", painted while he stood on the bank of the river which flowed a short walk from his room in Arles, shows the city lights reflected on the rippling water . . . but it also reaches with aching beauty into the blue-black universe with its radiant stars.

Vincent. In his entire life—a short, lonely life—he sold only one painting. His brother Theo, an art dealer, sold it for him. And yet, Vincent found such beauty in everyday scenes, and he gave that beauty to us.

My mother stood for a long time in front of Pierre-Auguste Renoir's "*Bal du Moulin de la Galette*", which portrayed people gathered at an outdoor dance hall on a sunny Sunday afternoon. The men wore straw hats; the women wore elegant summer dresses, their colors highlighted in the dappled sunshine. "There," said my mother wistfully, "is the French *joi de vivre*. Something that oil money can never buy."

Oh, I could go on, from painting to painting, from museum to museum. We visited the small bookshops, where Marius found Jacques Cousteau's *Le Monde du Silence* in French. He was determined to read it from cover to cover by June.

We listened to musicians playing in small courtyards. *Allegro vivace!*

My mother insisted that Loreen and Lamar pose for their portrait by one of the street artists. The artist caught exactly the deep happiness in their eyes.

And then—apart from the Arctic Sanctuary conference, this was without a doubt the high point of our trip—Marius guided us to the Cathedral of Notre Dame, built on an island in the middle of the river. We did not go directly to the big square in front of the church, but approached from the *Quai de la Tournelle*, on the bank of the Latin Quarter to the southeast of the cathedral, so that we looked across the water at the rear of the church, rising above the greenery around it. Never before had I understood how exuberant and intricate architecture could be. The flying buttresses which reached up to support the upper walls were not mere supports, but increasingly slender arches that lifted my vision toward the round windows, the steep roof, and the magnificent spire rising above the heart of the cathedral. Here was motion, made of stone.

Beyond the steep roof of the transept (the arm of the cross), stood the two majestic towers, their big shoulders making the tall needle of the spire all the more elegant.

I remembered Aili Biriita telling us, when she spoke in the University of Oslo auditorium, about the building of a cathedral. The first generation drew up the plan and laid the cornerstone, knowing that they would not see the completion of their great edifice. Several generations would build the walls, the windows, the vaults, the towers, and the spire. Those early architects gave a gift to the world which they themselves would never see.

Marius told us, beneath a sky becoming increasingly blue and a sun becoming increasingly bright, that Bishop Maurice de Sully laid the cornerstone in 1163, on the site of an earlier church which he had ordered torn down. He directed the construction of the unprecedented cathedral for thirty-three years, until his death in 1196, when the towering walls were still not completed. The western façade (the front wall of the church), was completed in 1225, a generation after his death. The towers were finished in 1250, after another generation's work. Almost another century passed before the cathedral, in 1345, was finally completed.

From 1163 to 1345: 182 years. At least seven generations. Today, 675 years later, almost seven centuries, we can still gaze with awe at those graceful arches which support not only the towering walls . . . but our faith, our belief, that yes, we *can* do

something unprecedented, something extraordinary, with the short time which we are allotted.

Yes, we can tear down the old and cast away the rubble, then design and build something worthy of who we are, of what we *could* be. But we need a special vision, which can reach into the future for at least a century. And we must be willing to give the world the greatest gift it has ever known.

Marius led us across a pedestrian bridge atop stone arches to a park at the eastern end of the island, a point of land that reached upstream, dividing the river which had flowed for eons of time. No wonder there had been so many philosophers who had lived and written their books in Paris; everywhere you went, there was a spot where you could pause and think.

We walked through the park past the southern transept of the cathedral, with its huge circular window high above us. We could see the colored glass within the lacework of stone, but we would not see the vibrant colors until we were inside the cathedral, looking up at the window with the sun shining through it.

Now our little group stood in front of the cathedral in an open square that was probably packed with tourists during the summer; but on this cold December day, the tourists with their cameras were sparse. Marius had us stand far enough back from the western façade, completed in 1225, eight centuries ago, so that we could look at the three great doors with their pointed arches, and at the jamb figures of saints who had been welcoming pilgrims for almost eight centuries.

We looked up, up, up, at a frieze of sculptures looking down at us, wondering if we were worthy to enter this great house of the human spirit.

We looked up at another huge circular window, the dull glass within the lacework of stone now catching the bright sunshine of mid-afternoon.

We looked up at a level of slender pillars, capped by the massive towers that held their giant bells. We hoped, we hoped, that we would hear those bells ring.

What sort of houses did people live in during the time when this cathedral was built? One-story huts of timber and thatch. A few buildings had a second floor, where people lived over a shop, or a barn. What must those early workers in their tunics have thought as this noble edifice rose into the sky? And what did the peasants think, coming from a village with their wares in a basket, when they saw, rising above the ramshackle clutter of city dwellings, the massive towers and the slender spire that beckoned them, a mere peasant, to visit the House of God?

Marius now led us beneath a pointed arch with a dozen statues of saints guarding the door, into an enormous towering room which was beyond anything I had ever seen. I was just as much awed by the magnificence as that peasant must have been seven hundred and fifty years ago. Our eyes were drawn first down the length of the nave (the central aisle), to the distant altar and the elevated cross. Our eyes were then drawn upward, and upward, and upward, past the giant lower pillars, the triforium gallery with its slender pillars, and the uppermost clerestory with its delicate stonework, to the ribbed vault that capped the long ceiling.

As we walked up the central aisle, past hundreds of neatly arranged chairs, we stared up at the beams of light angling down from the upper windows. I felt, I must admit, like an angel walking in the glow not of sunlight, but of celestial light that blessed us with its benison.

When we reached the transept (the short arms of the cross), we stared up at the huge circular rose window facing south, catching the bright afternoon sun. The colors were now radiant, within the lacework of stone tracery. We stood where the colors were spread across the stone floor, and thus we ourselves were lit by shards of red and green and blue and gold.

Here was a prayer, not from us to the God in heaven (about whom in my young life I had not given much thought), but from God Himself to us, asking us to see the beauty, and to be uplifted spiritually, so that we might become something more than we had been before.

Yes, though that early visitor had been a peasant when he arrived, within this great cathedral, he became a pilgrim. As did I, believing on that day more than I had ever believed before . . . that we *could* become something more than we had ever been. Perhaps that was what Aili meant when she asked us to find “the *best* that is in us.”

We looked at the sculptures on the altar of two kings kneeling before Mary with the dead Christ laid across her lap. Then we turned around to look down the length of the nave from this new perspective, and discovered, above the door, the silver pipes of an enormous organ. Marius, our extraordinary guide, now informed us that there would be an organ concert at seven o’clock on Saturday evening, tomorrow evening. A full orchestra assembled where we now stood, accompanied by the organ at the back of the cathedral, would perform Camille Saint-Saëns’ Third Symphony in C minor. “I recommend,” said Marius, “that we get here early, so that we can sit up front, between the two big voices.”

All five of us lit candles, even Loreen and Lamar, who of course had not been raised within a Christian church.

We walked slowly along the outer aisles, admiring the sculptures, including a figure of Joan of Arc wearing armor as she folded her hands and looked upward in prayer. Although I did not know the details of her story, I had learned in some dull classroom that she had somehow saved her country. A vase of yellow flowers stood beside her booted feet.

Yes, she would have understood saving not only her country, but the world itself, from the predatory invaders who sought to pillage and plunder.

After we had thoroughly immersed ourselves in the world of that exalted sanctuary, we stepped out the door back into the afternoon sunshine. Marius looked at his watch. “We have five minutes until it happens. I suggest we return to that little park behind the church.”

I asked him, “Until *what* happens?”

He gave me a look of impatience, with a slightly Gallic inflection of his lips.

And so it came to pass, that we were standing on that tip of grassy land pointing upstream into the flow of the river, when the great bells in the towers began to chime. Away from the chatter of the crowd, beneath a nearly cloudless blue sky arching over the city of Paris, we could hear the bells extremely well as they chimed through a *chançon* perhaps from the Middle Ages.

And then one large bell rang four deep, sonorous times, “Bong, bong, bong, bong!”

It was more than four in the afternoon. It was—the entire afternoon had been—a moment in history. Never before had I felt so much a part of humanity, not just now, but humanity during all the centuries which had led up to now. Joan of Arc was my sister. Maurice de Sully, who had designed the unprecedented cathedral and then laid the cornerstone in 1163, over eight centuries ago, was my teacher.

It was a moment of history, shared with our tightly-knit family. Who would return early tomorrow evening to hear the organ thunder down upon us a symphony that was both majestic and bold.

Chapter Thirty-Six

We learned on Saturday morning that Marius had alerted Aili Biriita, and thus the three hundred delegates to the Arctic Sanctuary conference had ordered their tickets to the organ concert. Marius had of course bought tickets for the five of us. Notre Dame had been alerted as well; three hundred and five seats for the delegates had been reserved by our French hosts at the front of the church, facing the orchestra.

But before that momentous event, a great amount of conference business had to be completed on Saturday, the final day of preparation before the Global Presentation on Sunday.

Aili invited the five of us to spend Saturday with her, so that we could listen to a rehearsal of the speeches which she and a number of delegates would give on Sunday. We had met with her a couple of times during the week for dinner, and thus we had met a number of delegates, but we had not yet attended the business sessions, which had been closed even to the media. Like the delegates who had written the American Constitution in sworn secrecy during the summer of 1787, the Arctic Sanctuary delegates did not want their intentions known until they were ready to announce them to the world.

However, Aili managed to get passes for the five of us on Saturday. We were granted permission, but we could not say a word about what we witnessed on that day.

All I will say now, many years later, is that Maurice de Sully would have been proud.

The delegates had dinner at various restaurants, then assembled, after taking the Metro to *Cité*, at 6:30 in the square in front of the Cathedral. The media may not have been allowed into the conference proceedings, but they were abundantly present when 150 well dressed scientists from around the world, and especially when 150 native peoples, many with painted faces, from the deserts of Africa and from the rainforests of the Amazon, as well as from the Arctic coast of Russia, assembled on that cold evening in December before the great door of the *Cathédrale de Notre Dame*. The Sioux delegates from Standing Rock stood together with their Zulu sisters and brothers from South Africa for the photographers; their picture, with fists raised, was on the front page of the Sunday edition of both *Le Figaro* and *Le Monde*.

At 6:30, the doors swung open. Our gracious French hosts escorted us into the Cathedral, dark now without the sun shining through the windows, but elegantly lit by a multitude of chandeliers. The delegates walked up the long central nave, marveling in their many languages at the pillars and arches and sculptures, and at the ribbed vault high above. The five of us sat in the third row, behind the Mangyan delegates from the Philippines, who pointed with keen interest at the various instruments carried by the members of the orchestra as the musicians took their seats in front of us.

Behind us, the *Parisiens* from their *arrondissements*, as well as tourists from their various corners of the world, took their seats until, as I saw when I stood up and looked back toward the organ, the cathedral was filled. The tall silver pipes—Marius told us that there were over eight thousand pipes—were dramatically lit by chandeliers against the dark stone wall and black circular window. I could see a tiny figure seated on the organ bench with his back to us, perhaps warming up his fingers by running them up and down the silent keys.

And now the conductor strode out in his black coat, black tie, and bright red handkerchief in his coat pocket. He bowed to the applauding audience, then he turned to the orchestra and raised his baton. The long nave, filled with people, became so silent that had an angel in the clerestory rustled her wings, we would have heard her.

I do not know if you are familiar with the Third Symphony by Camille Saint-Saëns, in which the orchestra plays with the accompaniment of a serene organ, and then a thundering organ plays with the accompaniment of an orchestra galloping to keep up. Do yourself a favor: pour a glass of red French wine, put on your headphones and reach back to the premiere in London in 1866, or the premiere in Paris in 1867. The Americans had just finished butchering each other on the battlefields of their Civil War, and Abraham Lincoln was dead, but in London and in Paris, and soon in New York, civilization took a majestic step forward.

We heard the plaintive opening chord, played by the strings, swelling with volume, then quieting . . . a chord which subsided into a minor key. We listened to the oboe, its bright solo voice filling the enormous cathedral. We listened to the plucking of the bass strings, as if some musical theme were creeping toward us. We listened to the stirring of the restless violins, as if a wind were tossing dead leaves into the air. We listened to the trombones, the French horns, and now to the flute as they added their rich sounds. The timpani rumbled, noted by the native drummers among us.

And then we were swept away by music increasingly powerful. The orchestra tossed its themes from bassoon to flute, from horns to strings, quieting now, then building with an even stronger momentum.

My mother, sitting to my left, reached for my hand and squeezed it as she whispered, “Merry Christmas, Sweetheart.”

I nodded. I could not speak.

To her left, Loreen stared with rapt attention at the violinists five meters from us, sweeping their bows with mounting vigor.

To her left, Lamar, whom I had carried unconscious in my arms, sat up with a start when the trumpets cut through the other instruments with their imperative alarm.

And to my right, the boy whose many hidden gifts had been frozen as he cowered in the dark, now stared with bright eyes at the conductor who swept his baton with his right hand, and beckoned or diminished with his left. Marius was home. We may have to take him back to Norway at the end of the trip, but Paris, and Tahiti, and the oceans of the world, all awaited him.

The second movement did not simply begin, but launched with a fury of energy. We had jumped from *adagio*, slow and serene, to *allegro*, full gallop. The woodwinds, especially the eager oboe, tossed the driving theme back and forth with the strings. And then, surprising in a symphony, we heard a piano playing a burst of rapidly rising notes, as if casting into the sky a handful of stars.

I now noticed that a woman playing violin in the back row, wearing a black blouse and slacks, was pregnant. Beneath the sweeping of her bow, the round protrusion was clearly evident. How nice for the Little One, to be immersed in the music of an entire orchestra.

A piccolo led, with delightful contrast, into a deep rich cadence of trombones.

And now, so unexpected and yet so momentous, following a soft oboe, the plucking of bass strings, and hushed flutes . . . a powerful organ chord in C major filled the cathedral, as if the curtain had opened upon a dramatic new world. The audience stirred around me. The orchestra now marched forward, confident and bold. The two great voices at the front and back of the vast cathedral embraced us, lifted us up, and filled us with music both heroic and ethereal.

Suddenly there was the piano again, played now by two people, four hands, casting clusters of stars into the heavens while the organ limned with steady chords the vast expanse of the universe.

My eye kept returning to the stunningly handsome man in a black suit playing the four timpani at the rear of the orchestra. Beneath his beating sticks with their large white cotton knobs, his drums roared with absolute precision, backing the horns, accenting the cellos, and sending the violins off on a run.

Oh, and now the cymbals are crashing with a glorious noise. The delegates from the Philippines are sitting tall in their seats.

Maestoso, reads my program as we move toward the *finale*: majestic, and bold. The organ marches imperious; the great pipes rumble in the rafters of the cathedral, trembling that ribbed vault. The sound thunders down upon our shoulders, shaking us, invigorating us, filling us to the brim with an exuberance so keenly alive.

The entire orchestra races at full gallop toward a mountainous crescendo, lit by a fanfare of trumpets, with timpani thundering and organ overwhelming all else with its final powerful chord.

Now a moment of silence while we breathe again.

And then the audience bursts into applause, peppered with calls of “Bravo!”

Maestoso! Maestoso! May we march forever Maestoso!

The three hundred and five delegates are on their feet, applauding fervently. The conductor bows to this distinguished portion of his audience.

And then, when the conductor sweeps his arm, inviting the orchestra to stand, the entire audience—we hear them behind us—roars with praise.

The conductor invites the organist to stand in his elevated perch at the rear of the cathedral. The audience turns around and again roars with praise.

The conductor walks off the stage, but the applause soon brings him back again. He bows, then gestures for the oboist to stand, for the flautist, for the clarinetist, for the bassoonist, for the entire woodwind section to stand, for the valiant brass to stand, for the tympanist (already standing), and now for the two pianists, a beautiful young woman and handsome young man, perhaps a married couple, to stand.

Waves of applause wash over the orchestra.

The conductor shakes hands with the concertmaster, who had led the violins magnificently.

He departs from the stage, then returns a second time, to another roar from the audience, who are now clapping together in synchrony.

The delegates, in lively discussion, moved slowly along the nave toward the door. When we stepped out into the cold dark night, we looked up, and Yes, we could see, above the glow of city lights, a few stars, cast into the heavens by the piano.

We walked together to the *Cité* Metro stop, boarded the train, then gradually dispersed to our various hotels. The delegates wanted to get to bed early, so they would be ready for the Global Presentation on Sunday.

Aili Biriita, in her blue and red *gákti*, told us before she got off the Metro to be at the conference center by noon. The program began at one. She had reserved front row seats for us.

Then she said good night to us, “*Buorre idjá.*”

“*Buorre idjá,*” we said, as we had learned on previous evenings.

She had no idea how much gratitude I felt, how much love.

Nor did my mother.

Until I told her that night at the hotel, before I lay down in my bed and listened to that thundering organ while I fell asleep.

Chapter Thirty-Seven

On Sunday, December 20, 2020, at one in the afternoon in Paris, the Arctic Sanctuary conference broadcast a three-hour show, **Healing Our World**, to over three billion viewers around their common home, planet Earth.

The show was hosted by Marcelline Duplaix, a professor of marine biology at the University of Paris. Her address to the world audience, as well as the short talks given by the other speakers, were available online as simultaneous audio translations in over fifty languages, so that most of the global audience could understand nearly every word.

Marcelline had worked during the two-week conference with the delegates from the Arctic to compile a series of pictures which introduced the Arctic to the audience, many of whom had never seen snow. Satellite images showed the shrinking of the ice cap since 1979. Graphs showed steadily rising temperatures at various Arctic locations, on land, in the seas, and in the atmosphere. Underwater cameras—and in some cases, cameras mounted on microscopes—showed the extraordinary range of life in the sea, from the algae and a variety of tiny animals that lived on the underside of the ice cap, all the way up through the food chain to schools of cod, gracefully gliding seals, polar bears paddling underwater, and some of the seventeen different species of whales that lived in the Arctic, swimming past in the blue-gray water like enormous ghosts.

The following set of pictures showed Arctic life on land, and in the skies. Viewers who knew little about the Arctic—it was cold and icy and far away—met a mother polar bear and her two cubs, sailed in the sky with a sea eagle (drone camera), and watched reindeer digging with their hooves down through the snow to the tundra moss, their primary food.

A third series of pictures briefly introduced the peoples of the Arctic, some of them indigenous, who had lived in the north since before recorded history, and some of them recent immigrants from lands further south.

Following this half-hour introduction to the Arctic, Marcelline showed a group photograph of the three hundred delegates, standing on a curving bank of steps—borrowed from a university choir—in front of the Eiffel Tower. The indigenous delegates wore their sealskin coats, or their native shirts over warmer clothing on the cold December day. The scientists wore their warm Arctic coats, or white laboratory coats, or a suit and tie. Nearly every delegate wore a round white cap, denoting the Arctic ice cap. Some delegates, however, wore their native feathers.

Live television cameras now scanned the conference hall, so the audience could see the delegates, some of them waving, at their desks.

And now, one by one, twenty of the delegates stood at the podium and addressed the world. I shall present the short talks of four of them, two Indigenous delegates and two scientists, including, of course, our Aili Biriita, who, as the Keynote Speaker, was the first on the agenda.

Aili Biriita Gaup

Human Rights Attorney Guavdageaidnu, Norway

Wearing her blue and red *gákti* and a round white cap, Aili Biriita spoke with a firm voice to over three billion people, many of whom were watching her in the middle of the night in their home countries. They had heard about this remarkable woman, and now they wanted to listen to the Sami attorney from the Arctic.

She stared with her dark, determined eyes into the camera, and then she said:

“On September 12, 2020, the peoples of the world held a referendum on three important questions.

“First: ‘Shall exploration, drilling, and extraction of oil within the Arctic Circle be forever halted?’

“Second: ‘Shall the Arctic be declared a protected sanctuary on Mother Earth, where mining of any sort, as well as military maneuvers, shall be forever halted?’

“Third: ‘Shall all efforts be made to replace fossil fuels with clean energy around the world by the year 2040, so that the melting of the Arctic ice cap can be halted as soon as possible, enabling life to flourish within the Arctic sanctuary?’

“By an overwhelming majority, the peoples of the world voted ‘Yes’ on all three questions. The next step, then, was to formulate a more concrete picture of what this Arctic Sanctuary should be. We thus gathered experts from two groups of people who have a deep knowledge about the Arctic: the native peoples who live there, and the scientists who have done years of research there.

“We felt, however, that we should not limit ourselves to one sanctuary on planet Earth. We should extend our vision to a network of sanctuaries around the world, each

one containing a vitally important ecosystem, and each one the home to indigenous people whose culture is rooted in that ecosystem.

“Thus we invited to this conference native peoples from around the world, as well as scientists from around the world, to contribute their knowledge and their wisdom to this unprecedented project. Together here in Paris, we are 300 delegates, equally divided as 150 scientists, ranging in age from eighteen to eight-six, and 150 indigenous peoples, ranging in age from twelve to ninety-two. We have worked together for two arduous weeks, with a crew of prodigious translators, and we have, I can say on behalf of all of us, learned an enormous amount from each other. We have learned not only a wealth of factual information, but we have also learned to look at Mother Earth from a multitude of different viewpoints. Some of us lower sophisticated thermometers into the sea to record temperatures at various depths, while others of us lift our faces to the wind and the snow and in that way learn what the weather will be for the next three days. We need each other. That is perhaps the greatest lesson that we learned during our two weeks together: scientists and native peoples can work together symbiotically, making more discoveries, and understanding more deeply, than we ever could alone.

“Today, we would like to share some of what we have learned with our fellow Earthlings around the world. We should begin, I think, by asking, What is the purpose of a sanctuary? Or better, What are the many purposes of a sanctuary?

“First, a sanctuary provides the creatures which live within its fragile ecosystems the *protection* which they need to flourish. An Arctic sanctuary will provide the life in the Arctic seas with all of the essentials which have enabled these creatures to thrive for eons of time: clean water, abundant food, familiar temperatures, correct salinity, reliable currents, and stable seasons. What happens when we give Mother Earth the opportunity to heal herself? She will show us, if we just let her do her job . . . in a protected sanctuary.

“As we protect life in the sea, so we protect life on the Arctic islands, on the Arctic coasts, on the Arctic tundra, in the Arctic mountains. We *protect* the life on the land. We do not build hydroelectric dams which flood the land; we do not build wind turbine farms in the middle of the tundra where reindeer have grazed for centuries; we do not build railroads where none are needed. We *protect* the life from such unnecessary industrial intrusions.”

She paused, staring into the camera with eyes filled with the strength of her people.

“The sanctuary has a second important purpose: it is a place where we not only protect, but *monitor* the health of its ecosystems. As we monitor the health of life in the sea, and on the land, we monitor the health of the entire sanctuary. And as we monitor the health of the sanctuary, we monitor the health of the Earth herself.

“Every sick patient in a hospital has a staff of health specialists who monitor the patient’s health. Let the native peoples of the Arctic do the urgent job which they were born to do: better than anyone else, they can monitor the health of their sanctuary. And if we have fifty sanctuaries around the planet, with fifty communities of native peoples monitoring them, then we are well on our way to monitoring the true health of our home in the universe.

“Let the native peoples share that crucial job with scientists who love to stand on the deck of a ship and stare out at the colors of the Arctic dawn. With scientists whose passion is to study the butterflies which live deep in the rainforests of Brazil. With scientists whose passion is to study the desert flowers in Ethiopia which bloom, or do not bloom, depending on the regularity of the life-giving rains.”

She paused.

“Do you see the difference, between putting the fragile land into the care of people who love it . . . and putting it into the care of people who want to cut down every tree, burn every acre, dig mines and dump the talus into the nearest fjord, and bore holes deep into the seabed with the hope that they earn back a return on their investment before a pipe breaks and spews out its filth? Those who love the land will share their knowledge of the land with us; those who profit from the land will hoard their secret sums of money in bank accounts far from that leaking pipe.

“Yes, let the people who have lived on the land and by the sea for centuries be monitors of the land and the sea. We know the health of the fish in the mountain lakes, in the streams and rivers, and in the seas. We know the health of the birds on the mountain slopes, in the valley wetlands, and on the beaches. We know the health of the foxes and the mice. We know the health of every reindeer in our herds. We know the health of the buds and the flowers and the fruit of a multitude of berries. We know the health of the birch and the pine, and of the tiny juniper high on the mountain. We know the health of the ferns growing beside the mountain spring.

“We know the ways of the wind. We know the colors of the winter sky when the sun hides beneath the horizon to the south. And the snow! A child of twelve can teach you more about the snow—how cold, how dry, how fresh, how old, how deep, and from what direction on what wind—than any Olympic skier will ever know.

“Imagine, you peoples of the world who are watching today, how much we could learn about our planet, our home, our Cradle of Life orbiting around the sun, if we monitored fifty sanctuaries through the entire 21st century. It would be the greatest harvest of knowledge in all of human history. And it would save our lives.”

Again, she paused.

“The third purpose of an Arctic Sanctuary, and of a growing quilt of sanctuaries, is to enable students to visit them: young people who want to sail on the deck of a ship, who want to hike on a trail through a forest, so that they can explore the world which their generation is helping to protect. Let them, students from countries around the world, study in classrooms on board that ship, and in classrooms deep in a forest, so that they can learn not only a wealth of factual information, but so they can learn as well . . . to look at nature from a multitude of different viewpoints. Let them lift their faces to the wind bringing fresh snow, so that they not only know the digital temperature, but become acquainted with the spirit of winter.

“Yes, the tourists are invited as well, in limited numbers, and as long as they behave. Let the older ones know that they will give something deeply *good* to their grandchildren, and to the generations yet unborn.”

Aili paused, then she smiled to her audience.

“Let me show you what is possible when the Sami people and the Norwegian government work together.”

We now saw on the large conference center screen, and on television screens around the world, a picture of a modern building with large windows framed by a façade of wood. “Here is our *Sámi allaskuvla*, our Sami University, in my hometown Guavdageaidnu, on the Arctic tundra in northern Norway. We have two hundred and seventy students and an academic staff of fifty-two. We offer courses on the bachelor, masters, and even the doctoral level. We teach the Sami language on all levels, and thus have been very successful at keeping our language alive. We teach reindeer husbandry, so that our herders are absolutely up-to-date in all aspects of their profession. And we teach Journalism from an Indigenous Perspective, which prepares students to research and write articles that are perhaps a little different from what you would find in the major media.”

We looked at pictures of the impressive library; of a classroom filled with students, some with their hands raised; and of colorful Sami clothing, sturdy cups carved from birch burls, and beautifully crafted knives with reindeer horn handles.

“Students can become experts in the making of all the crafts—or *duodji*—which are a part of our culture.

“The Sami University is well connected with other institutions not only in Norway, but throughout the Arctic. As a member of the University of the Arctic, we have close contact with other Indigenous universities. And as a member of the World Indigenous Higher Education Consortium, our University reaches out to Indigenous peoples around the world. Our classrooms are truly global.”

Aili now showed us a series of pictures of the Sami Parliament, or *Sámediggi*, in the neighboring town of Karasjok. From the outside, the building—reaching into the sky like two split pieces of a *lavvo*, or teepee—was very intriguing (unlike the usual Norwegian box). The Parliament building was connected to a semicircular office building which wrapped around it, forming a grassy courtyard between them. Had I been there as a visitor, I would have been torn between gazing at this truly imaginative architectural complex from different angles—all surrounded by the birch trees of the tundra—or climbing the steps to the door to see what was inside.

So of course, Aili took us inside. When she showed us the central hall of the Parliament, I heard murmurs of astonishment from the delegates—scientists and natives alike—for the room was not simply dignified, like most other congresses, but stunningly beautiful, a work of art. Almost every aspect of the large room was done with wood, even the wrap-around second-floor balcony for spectators. Behind the front desks and speaker’s podium was an elevated mural of abstract blue circles, as if we were looking into the infinite reaches of the cosmos . . . or, as if the cosmos were watching us. Above that large painting was an arching window of clear glass, looking out at the upper tip of the split *lavvo*, and at the open sky.

Never before had I seen a room which had so much *outside* on the inside. The Norwegian colonials had tried for centuries to crush the Sami spirit—students at the University had written thesis after thesis on that complicated subject—but clearly, they had failed. Here was a building filled with more life, more energy, more beauty, more determination, than any other modern building I had seen. (Maurice de Cluny would have been right at home.)

Now Aili showed us the Parliament library, a large open space with different levels, also done entirely with wood. Lit by hanging lamps, the library was almost a ballroom with bookshelves. Aili told us that thirty years ago, very few books had been published in Sami. Now, because of their own publishing house, there were hundreds

of books in Sami: history books, novels, collections of poems and artwork, collections of old photography, and dozens of children's books.

She showed us pictures of the Sami Theater in Kautokeino, where Sami drama and Sami music were performed. We visited the Sami Museum, filled with treasures which had been handed down from generation to generation . . . and finally donated by families to the museum.

We visited the Sami radio station, from which a full repertoire of programs, including Saturday morning programs for children, were broadcast in Sami.

We watched short passages from two feature-length films made by a Sami film company, with Sami actors, portraying two important eras in their history.

And then we watched—the entire world watched—a vast herd of reindeer moving like a long slender river across the rolling snowy tundra, while the magical, haunting sound of a Sami *yoik* filled the conference hall, as well as living rooms on both sides of the Equator. We were watching, as Aili explained, a film from the winter a year ago, but we might as well have been watching an event on the tundra from five thousand years ago.

Yes, even in *Notre Dame de Paris*, time did not reach so far back.

The screen went dark; silence filled the conference hall.

And then we applauded—stood up and applauded—for these heroic people with so much spirit, so much determination, and so much to teach us. Yes, Aili had just enabled people around the world to progress from the cowboy and Indian movies of Hollywood to the reality of what Indigenous people *could* do, given the opportunity, and the financial support, which they had always deserved.

“When the day comes,” said Aili, “that every Indigenous community has its own schools, its own university, its own Parliament, its own publishing house, its own museum, its own theater, all within the sanctuary which it nurtures and monitors, then this world will truly step forward toward genuine civilization in the 21st century.”

She paused, her face stern.

“But this can happen only if the people who live within the sanctuary are in charge—fully in charge—of making the decisions on behalf of the land and the rivers and the lakes and the seas and the ice and the *life* within that sanctuary. We cannot be forever at the mercy of shareholders and political careers. Part of the work ahead of us is to formulate and write a Bill of Rights for the land itself, for the sea itself, for the ice itself, and for the algae that lives on the underside of that ice. A Bill of Rights for the

diatoms and pteropods and krill and herring and cod and seals and bears and the great whales who leap with all their magnificence above the sea for one splendid moment in the light of the sun. These are the creatures who have lived here long before we arrived, and these are the creatures who have no voice . . . until we speak for them.

“A Bill of Rights for the *life* that lives on this planet. When we are able to write such a document, then we will truly step forward toward genuine civilization in the 21st century.”

She paused, then she added, “The Creator shall surely bless us in this endeavor.”

“Let me finish by saying, Yes, this is a new way of thinking. But it is the only way which will enable our children—*all* of our children—to live their lives with hope.

“Some will say that an Arctic Sanctuary is just a dream, a fanciful, beautiful dream, which will never fit within the world of harsh reality.

“Then let me remind you, that there was once a time when, in the midst of the harsh reality of a vast and burning and lifeless universe, the Creator bestowed upon this little ball of dust a Dream Seeded in the Earth. The Dream began with tiny cells of life, adrift in a churning sea. They divided and grew, became more complex, and followed their various destinies from the sea to the land, and from the land to the sky.

“At one point, they opened their mouths not simply to eat, but to speak with words, explaining the thoughts that they were thinking. Later, they wrote those thoughts on papyrus, on tablets of clay. They wrote and then printed their thoughts on paper. And today, we are able to speak with each other around the world, bouncing our words off satellites as we share our thoughts about the future of the world.

“Are we to stop here, because we fight our final battle in the Arctic over the last barrel of oil? Are we to stop here, while we hurl at each other bombs filled with fire borrowed from the sun? Are we to stop here, the last chapter of our existence a shabby tale of greed and suicide?

“Or shall we live up to that original Dream? Shall we continue this momentous journey? Shall we honor the Creator by honoring the creation?”

“Good peoples of the world, the decision is yours.”

She bowed. “Ollu giitu. Merci beaucoup. Shukran. Thank you.”

Aili Biriita walked with quiet dignity back to her desk, where a scientist from Saint Petersburg shook her hand.

Chapter Thirty-Eight

Karl Thorne-Thomsen

Arctic Researcher, Tromsø, Norway

Dr. Karl Thorne-Thomsen, wearing a white cap which accented perfectly his bushy white beard, stood at the podium.

“For two weeks here in Paris, two very different groups of people have shared their knowledge about one subject, planet Earth. We scientists and the native peoples of the world have learned an enormous amount from each other. I can say, as a man who enjoys *learning*, that these two weeks have been a feast.

“For roughly forty years, scientists have struggled to awaken the public to the dangers of global warming, but oil companies paid for their big lies, and politicians voted as they were paid to vote, and people in general were enormously slow to wake up. Then what a pleasure—what a *joy*—it has been to engage during the past two weeks with these bright native peoples who speak the honest truth and genuinely want to solve the urgent problems that grow worse and worse by the year.

“The scientists in this room today say ‘Thank you’ from deep on our hearts to you native peoples from around the world.”

The scientists stood up at their desks and applauded the Indigenous delegates, who responded with mutual applause.

Dr. Thorne-Thomsen now continued, “Let us take a look at the Big Picture. The International Renewable Energy Agency, IRENA, issued a report in April of 2018, about a year and a half ago, called *Global Energy Transformation: A Road Map to 2050*. This report examined what we need to do, by 2050, in order to keep the world’s temperature from rising more than 2 degrees centigrade, as mandated by the Paris Climate Accord of December, 2016. In general, we need to make the transition from coal and oil to sun and wind six times faster than we are doing today. Every wind turbine we build should be six wind turbines. Every solar farm should be six solar farms. Every roof covered with solar panels should be six roofs. We have got to accelerate the pace, *substantially*.

“IRENA states that during the next thirty years, we need to invest 2% of the global GDP, the gross domestic product of each country, per year into this clean energy transition. If we do so, the percentage of clean energy in Europe would rise from 17% in 2015 to over 70% in 2050. China would progress from 7% to 67%.

Most countries could reach 60% or more. Such steady progress would give us a fighting chance to limit the devastation caused by global warming, simply by reducing the amount of carbon pollution in the atmosphere and the oceans.

“Yes, such heroic progress would give us a genuine chance to survive the great challenges ahead of us in the 21st century.

“The cost of investing 2% of our global GDP into the clean energy transition during the next thirty years, according to IRENA, would amount to 1.7 trillion dollars. But the benefits far outweigh the costs. Decreased environmental damage from storms, increased health benefits, and salaries from new clean energy jobs, among other benefits, would amount to 52 trillion dollars by 2050.

“If anything is a win-win game, this is it.”

He paused, then he said with a smile:

“Jobs. How many new jobs would the clean energy boom create? IRENA estimates that 19 million new jobs would be created by 2050. If these well-paying jobs, and the required education and training, are shared fairly around the world, they will lift millions—potentially billions—of people up to a comfortable standard of living. The socioeconomic benefits for families and communities will be just as important as clean air and reliable electricity.

“Truly, the development of clean energy, if done wisely, can do more for the development of prosperity, of education, of health, of democracy, and of peace, than any other collective enterprise in all of human history.

“Let our goal then be to produce, as IRENA recommends, *two-thirds* of our energy as clean energy by 2050. The next three decades could be the most exciting and productive decades that humanity has ever known. We can then set our sights on 90% by 2075, and 100% by 2100.

“Scientists are ready to go to work. The native peoples are ready to go to work. Mother Nature is ready to go to work. Join us, my friends around the world, so that these two weeks in Paris are just the beginning of the next 80 years of unprecedented human progress.”

Dr. Thorne-Thomsen paused, then he said with growing vigor in his voice:

“I am an Arctic researcher, at home on the northern seas. And though at my age of sixty-two, I may not be with you, I still look forward to the winter—perhaps in 2079 to 2080, perhaps in 2092 to 2093—when the Arctic ice cap begins to *grow* again.

“During that winter, when satellites are measuring the *growth* of Arctic ice, I think that not only will the peoples of the world celebrate their victory, but the Creator himself will surely look down and smile.”

He stepped out from behind the podium and bowed with his hands over his heart to the applauding delegates.

“Thank you. Merci beaucoup. Спасибо. Ollu giitu.”

Chapter Thirty-Nine

John Risingbear

Elder, Lakota Sioux, Standing Rock, USA

John Risingbear, whose face was etched with eighty-five years of embittered life on the Standing Rock Reservation in North and South Dakota, glared into the television camera.

“We are tired of looking at your world from the inside of your prisons.

“We are tired of looking at your world from the bottom of our graves.

“We who once heard the thunder of the hooves of a thousand buffalo, now listen to your police shouting at us through bullhorns to get off our own land.

“You have always had more guns,
you have always had more money,
but you never, never, *never* had more wisdom, nor even simple respect.

“You plunder your mother,
you poison your mother,
and now, even as your mother is dying,
you can think only of more oil,
you can think only of more guns.”

He gestured toward the scientists in the conference room.

“Now at last, we have met with good men,
Men of knowledge, not men of greed.

“We find that we can speak mind to mind, heart to heart,
about the rains which are vanishing,
about the storms that are angry,
about the heat that dries our Mother Earth.

“These good men share the knowledge which comes from modern machines,
while we share the knowledge which comes from ancient summers, ancient winters.

“They learn through their science,
we learn through our spirit,
and both, we say, are good,
for both science and spirit offer a path
to wisdom, to respect.

“But you who scorn science,

you who scoff at the spirit,
 your minds are as small as the hole
 at the end of the barrel of your gun.”

He paused, for a very long moment of silence.

“So we say to you: Watch and learn what science and spirit together can do.

“Give us one century without your chainsaws,
 one century without your poisonous mines,
 one century without your assassins, your *assassins*,
 and we will show you what Mother Earth can do.

“What the sun can do, what the winds can do,
 what the rivers can do, what the seas can do,
 to bring clean power to the peoples of the world.

“Give us our land for one century,
 and we shall give our planet its cap of ice.

“We shall give the farmer a bountiful crop,
 we shall give the fisherman a bountiful catch,
 we shall give the children all they need to grow, to grow.

“We shall take away the mother’s tears,
 we shall take away the father’s rage.

“Yes, we shall bestow upon all our sisters and brothers,
 the original dream, the original gift:
 the blessing given by the Spirit on that day of creation at the dawn of time,
 the blessing . . . which is ours if we but accept it,
 the blessing of Peace.”

He cocked his head with dignity.

“Give us our land for one century, and we shall be free from you, forever.”

Every delegate in the room stood up to applause as John Risingbear walked,
 looking from face to face at the friends whom he had met during the past two weeks,
 back to his seat.

Chapter Forty
Aqeelah Aamir
Glacial Scientist
United Nations Intergovernmental Panel on Climate Change
Islamabad, Pakistan

Dr. Aqeelah Aamir, wearing a blue *shalwar kameez* and white head scarf, spoke with the voice of a woman who had long ago run out of patience.

“Peoples of the world, hear me: we are tired of your wars.

“I speak for the community of scientists, who have worked for decades to understand the complex manifestations of global warming. During these years of extraordinary international cooperation, we have been hindered in our work because some of the brightest minds in our countries . . . work for the military. They do not design climate models; they design cruise missiles guidance systems. They do not design the next generation of solar collectors; they design smart bombs.

“Peoples of the world, hear me: if we are going to meet the great challenges of global warming, if we are going to make the transition from coal and oil to sun and wind soon enough to save the Arctic ice cap, then we cannot continue to compete with the military for manpower . . . and money.

“These barbaric, criminal, and utterly unnecessary wars must stop, or we will not manage to build a global clean energy grid, much less the wind and solar farms to feed it.

“Countries around the world spend billions of dollars to build weapons, billions more to buy them, when we should be educating our young people to become the next generation of great scientists and visionary engineers. We cripple our children, we steal their future, while we feed the beast called War.

“As a woman from Pakistan, I have watched the tides of war flow back and forth, never bringing victory, never bringing peace, but bringing only grief to families, and another call for revenge.

“Now Pakistan has nuclear weapons, and neighbor India has nuclear weapons, and neighbor China has nuclear weapons, and neighbor Russia has nuclear weapons. Are we safer? Are we more secure?

“If America and Russia hold a nuclear knife to each other’s throats in the Arctic, while they bicker over their oil, what happens to the other members of the ‘nuclear club’? Shall we be drawn into the brawl?”

She paused, staring deep into the camera at the billions of people watching.

“As a scientist, I have worked for many years studying the flow of streams and rivers down the slopes of Pakistan’s great mountains to the villages and farms below. Especially as a young woman, I hiked the mountain trails to villages where people spend their entire lives drinking water from melting snow.

“But now the snow is melting too fast, and the snow line moves higher and higher up the mountain. Now the snow in winter becomes rain in winter, water which flows too soon down the mountain, leaving the stream beds dry in the too hot summer.

“What shall I tell my many friends who once welcomed me to their villages, who guided me on their trails, who fed me, who gave me a place to sleep, who kept me safe? Shall I tell them that we are too busy building bombs to bother with their snow? Shall I tell them that men are making profits, while the glaciers—glaciers more ancient than the timeless villages—are slowly vanishing?

“Shall I tell them that for their children . . . there is no hope?”

She paused, then she slapped the top of the podium with a “Bang!” that jolted three billion people in their chairs.

“Peoples of the world, hear me: we have no more time for wars. They are a plague of our own making. If wars were no longer profitable, 90% of them would stop within one month.

“Yes, let us build a sanctuary in the Arctic, but let us build as well a sanctuary which wraps around our entire world, a sanctuary where we are forever safe from war. And where we can get on with the business of working with the sun and the wind, and with each other.”

She stepped out from behind the podium and bowed with her hands pressed together. “*Tuhāḍā dhanavāda. Thank you. Merci Beaucoup.*”

Chapter Forty-One

After the final speaker, and with about fifteen minutes left in the three-hour program, Marcelline told us that we had come to the “*grand finale*, which has been arranged for the Arctic Sanctuary conference by the government of France.”

This was a surprise. None of the delegates knew about a *grand finale*.

The lights in the conference hall dimmed to near darkness. And then on the giant screen—and on screens around the world—we saw a picture of the Earth taken from space. We could see the curve of the Earth, but not the entire planet. Were we in a plane at a very high elevation?

Below a thin veil of scattered white clouds, we could see rumpled brown land. Blanketing the curved horizon was a thin layer of blue: our atmosphere. Above that membrane of blue was the black of space.

“Welcome,” said a woman’s voice in English, “to the International Space Station. You are watching a live picture taken by our camera as we are passing, at an altitude of about 400 kilometers, over Africa.”

Yes, we could see now that the picture was moving! The scattered clouds over the brown land shifted a bit. I could hear murmurs of amazement from the delegates.

“We are traveling at a speed of 27,600 kilometers per hour, or 7.67 kilometers per second. We thus orbit the Earth every 93 minutes, enabling us to see sixteen sunrises and sixteen sunsets every day.”

Now the picture changed, and we saw the International Space Station itself, photographed from some other space vehicle. Again the delegates murmured with astonishment.

The space station looked like an enormous rectangular raft, transected by a long tube with other smaller tubes attached. Sixteen solar panel arrays, like giant flat wings, caught the light of the sun. I heard Marius whisper beside me, “Absolutely amazing!”

“This photograph, taken from the Space Shuttle *Atlantis* on May 23, 2010, shortly after it had undocked from the International Space Station, shows the station from the rear. I am speaking to you now from inside the space station, on December 20, 2020. Would you like to get acquainted?”

Now we saw two people, a woman and a man wearing blue T-shirts and trousers, floating beneath a dome with several windows. The woman smiled as she waved to us. “*Bonjour!* I am Françoise Blandeau, from France.”

Now she gestured, “And my colleague is Yuri Zhigulin, from Russia.”

Yuri, floating nearby, smiled and gave us a wave. “*Preevyet!*”

Françoise explained with her beautiful French accent, “We are two members of a crew of six. You will soon meet the others in different parts of the space station.”

Yuri told us with a wonderful Russian accent, “We are in the ‘cupola’, a dome with seven windows made in Italy. The largest window is this round one at the top of the dome, eighty centimeters in diameter.” He reached his arm toward the camera which had been filming him and Françoise, took it in his hand and now pointed the camera at the round window, ringed by six trapezoid windows. “When we are not working, we often come to cupola so that we can look out the windows at our tiny blue planet, and at the vast expanse of space.” He laughed. “When I am working, I am a cosmonaut. But here in the cupola, I become a philosopher.”

Floating to a new position, Yuri now pointed the camera out one of the trapezoid windows. We—Earthlings safely seated on our little planet—could see brown at the bottom of the picture, and above, beyond a clearly defined edge, the blue of an ocean. “We are traveling in a southeasterly direction, as you would plot our course on a map of Earth, so that our orbital inclination is 51.64 degrees southeast from the Equator. You can see the coastline of Tanzania to the north, Mozambique to the south, and then the blue water of the Mozambique Channel. If you look carefully at the top of the picture, you can just see the island of Madagascar coming into view.”

No doubt the people Tanzania, Mozambique and Madagascar, watching their screens at this moment, took a look at their countries as they had never seen them before.

“*Eh bien,*” said Françoise, “now maybe you would like to meet Riku Kobayashi from Japan.”

We now saw a man in T-shirt and shorts running on a treadmill, but he was horizontal rather than vertical, and he was attached to the treadmill by bungee cords from his waist to the edges of the treadmill. He glanced at the camera and called, “*Kon’nichwa!*”

We heard the voice—a man’s voice—of whoever was holding the camera, telling us, “The members of the crew must exercise at least two hours a day, to maintain muscle tone and bone strength while we are weightless for prolonged periods of time. Riku puts us all to shame, for he sustains the most rapid pace on the treadmill, as well as the most elevated heartbeat.”

“*Hai, hayaidesu!*” said Riku with a quick grin. “Yes, fast!”

Then Riku stared ahead as he, perhaps showing off, increased his pace.

“Now,” said the voice of the man holding the camera, “let’s go visit the module called *Destiny*, which is our primary research facility.”

The camera took us, in the hands of the floating photographer, through a long module with square sides that were filled with equipment, then through a round hatch to another module, where two men were working at separate stations.

“May I introduce you to Frederik Rasmussen, from Denmark, who is studying thunderstorms *not* from below the storms, as did Benjamin Franklin with his kite and key, but from *above*, in the International Space Station. Frederik, tell us about your work.”

“*Hej!*” said Frederik, seated in front of a large computer screen. “Let me show you my electric friends.” We saw on the giant conference hall screen the same picture that Frederik had on his screen: a round, puffy, blue-white glow with a collar of glowing clouds wrapped around it, against a background of absolute black. “This is an upper-atmospheric thunderstorm on Earth at night. Such storms are difficult for us to study from the surface of the Earth, because they are too high for balloons carrying instruments, and too low for weather satellites orbiting above them. But from our low-orbit ISS—the International Space Station—we have a perfect view of lightning flashes in the stratosphere and mesosphere, all the way up to the ionosphere, the very edge of genuine space.”

Frederik now showed us a video of a dozen thunderstorms flashing at night over Siberia. Though we could not hear them, we could imagine the immense power in those flickering storms. To watch them was mesmerizing.

“Let me show you something you will never see from your backyard.” He showed us a picture of a widening beam of blue light reaching upward from the top of a glowing thundercloud. “This is a blue jet, a discharge of lightning which does not flash down to the Earth, but shoots *upward* thirty kilometers into the stratosphere. *Ka-Boom!*”

We stared at the magnificent wand of blue light, reaching upward into the black night. With all of this beauty and with all of this mystery, I thought . . . we are about to risk our existence here for a few last barrels of oil?

“Our flight path around the Earth enables us to observe the tropical and subtropical regions of our planet, home to the world’s largest thunderstorms. Let’s take a look at a wet night over southeast Asia, when the rice paddies are getting a good soaking.” We now watched another video of flashing white clouds stretching to the horizon, but this time we could see, unbelievably beautiful, a rising crescent moon in the distance, just above the limb of the Earth. In that moment, I felt more deeply about the world I lived in than I had ever felt in church.

“Well,” said Frederik, “while I have you here, maybe you would like to see Paris at night. Let me dig into the archive here . . .”

And then we stared at another stunning picture, of the lights of Europe on a very clear night. The picture was so overwhelming that the delegates began to clap. “That large glow which you see in the center is Paris. To the bottom right you can see the boot of Italy. And to the bottom left, the Iberian peninsula. To the upper left, the British Isles, with London glowing especially bright. At the upper center, those four bright spots in a horizontal row are Oslo, Stockholm, Helsinki, and Saint Petersburg. The four sisters, and may they always be the four *amicable* sisters.”

He paused for a moment to make his point, then he said, “If you look at the very top of the picture, you can see a faint pale green glow: the northern lights over your future Arctic Sanctuary.”

I leaned forward in my chair in the front row and looked to my right at Aili, whose uplifted face was filled with . . . more than astonishment, more than delight.

It was as if the Creator had taken us by the hand and swept out her arm toward this jewel in space while she said to us, “*This* is what I have given to you. *This* is what you must protect, forever.”

Now we saw once again Frederik at his laptop: one man from Denmark giving to the world pictures as new and beautiful as the pictures which Vincent van Gogh had given to the world. Pictures which made us love more than we had ever loved before this place where we lived.

“Thank you, Frederik,” said our still anonymous cameraman. Frederik gave us a wave, then returned to his thunderstorms.

“Now may I introduce you to Sergei Demidov, from Russia, who is working with blood components in a low gravity setting.”

Sergei, seated at a nearby research station with his hands inside gloves which reached into a lit plastic box, turned to us with a smile and said, “*Dobrih djen!* Good afternoon to all of my friends on what I hope is a peaceful Earth. We wonder, you know, up here, why it is so difficult for you folks down below to get along.”

“That’s right,” said our cameraman. “But tell us, Sergei, about your work.”

“*Konechno*. Of course. I work with the components of our human blood, especially those, such as the white blood cells, which help us to combat sickness and various diseases. Here in a microgravity setting, I can coax them to behave a little differently than they do when loaded with the heavy weight of gravity. If I can better understand the way leukemia works, then we might be able to help millions of people around the world.”

“American people as well as Russian people?” asked the cameraman.

“*All* people, on every continent,” said Sergei insistently.

“Where are you from, Sergei?”

The Russian laughed. “As you say in America, I am from ‘the mean streets’ of Novosibirsk. And where are you from, Charles?”

Now the cameraman spoke with a very definite accent, “Sergei, Ah’m from the mean streets of Birmingham, Alabama. What do yo’ say we show the folks back home what it looks like when a Russian and an American shake hands.”

Sergei pulled his right hand out of the glove in the plastic box and reached toward Charles . . . and now we could see a black hand reach out. The two men shook hands on millions of screens around the world.

“Thank yo’, Brother,” said Charles.

“*SpahSEEbah*, Brother,” said Sergei.

“Now,” said Charles, “Dr. Sergei Demidov, would y’all take the camera and show the good folks at home Dr. Charles Montgomery, your colleague in space?”

Sergei pulled his left hand out of the left glove and took the camera from Charles, whom we could see now, an African-American with a serious look on his face as he stared into the camera.

“Sergei, do you know what you and I do *not* want to see when we look out the cupola windows?”

“I do, Charles. We do *not* want to see the rising orange cloud of a nuclear explosion, not over Moscow, not over Washington, not anywhere on that beautiful planet.”

“Are you listening, world?” asked Charles. “Are you listening?”

Then the two hands, white and black, let go and Charles took back the camera.

“See you at dinner, Sergei.”

“I hear we have fresh tomatoes.”

“You bet. I was just about to show the folks our new crop.”

The camera floated through a round hatch, through another module and another hatch, into a module with—the delegates murmured with admiration—shelves of plants growing in trays. Charles pointed his camera at a tray of “hydroponic tomatoes, grown from seeds. We use LED lamps, red, blue and green, and variations of nutrients in the water. As you can see,” he pointed his camera at trays around the module, “we have lettuce, onions, cucumbers, and even zinnias. How do zinnias pollinate in space without bees? Well, you hire an Alabama gardener who becomes a substitute bee.”

Charles paused for a moment, then he explained, “When humans embark on longer missions, such as the trip to Mars, they will have to grow at least part of their own food. When I can perfect a sweet potato pie, my mission in space will be accomplished.”

One of the delegates, no doubt from the American South, quietly applauded.

“Good bye, all you good folks down below. Behave yourselves. Now I send you back to Françoise.”

Françoise and Yuri appeared once more on the screen, floating in the cupola.

“*Merci*, Charles. We have one more picture which we would like to show before we say farewell and sail into the night. From our archives, here is a video of the Amazon rainforest.”

We saw on the screen a vast green forest, with checkerboard patches of brown. The video must have been taken through a telephoto lens, because the rainforest was close enough that we could see a dozen long plumes of gray smoke.

“The cutting and burning of the rainforest,” said Françoise sternly, “must *stop*. Or there will be no tomatoes, no zinnias, no bees, on planet Earth.”

Yes, there was our crime, perpetrated by almost every one of us nearly every day, as we bought our modern groceries in the neighborhood store.

Our crime. Our madness.

“*Écoute*,” said Françoise. “Listen. More than two hundred scientists from eighteen countries have flown in the International Space Station. The first crew, Expedition 1, arrived on November 2, 2000. Thus we have been travelling without interruption in the space station for twenty years and forty-nine days. We want you to know that we have been looking and looking, but we have not yet found on our journey . . . another planet able to sustain life. We have not yet found another blue marble, wrapped with oceans. We have not yet found another planet wrapped by a thin but perfect layer of atmosphere.”

She stared into the camera for a long moment.

“As far as we can determine, you live on the only such planet in the nearby universe.”

The camera turned to Yuri, who said, “Take good care of it. It’s the only one you’ve got.”

Then, as Françoise and Yuri both waved, we heard the voices of all six members of the crew. “*Doh svidania. Au revoir. Sayonara. Doh svidania. Farvel. Good bye.*”

And then they were gone. We saw on the screen the view from the original camera, showing the dark shadow of night wrapping over the Earth.

The screen went blank. The overhead lights became brighter, and we were back in the conference hall, silent, until the applause began.

Aili walked forward to a microphone and said, “*Merci*, Marcelline. *Merci* to the good people of France. From deep in our hearts, we thank you.”

The delegates were standing now, calling out with a variety of accents, “*Merci! Merci!*”

From the Cathedral of Notre Dame to the International Space Station. Standing with my family as we applauded, I felt, truly felt, that I was a Citizen of the World.

Part IX

Peace

Chapter Forty-Two

The year 2020 became a benchmark in the 21st century. Before 2020, the old ways still had their grip on us. After 2020, we broke free.

Some people remembered back to the holidays and New Year celebrations that led into 2020, when people of all religions did not give gifts to each other. Instead they sent the money to organizations working with the 65 million refugees scattered around the world. (Some pointed out that the number of refugees roughly equaled the 65.7 million people living in France.) Even children stated firmly, “The only gift I want for Christmas, for Mawlid an-Nabi, for Hanukkah, for Kwanzaa . . . is peace.”

Some remembered back to International Women’s Day in March, when huge rallies in cities and towns and villages around the world launched the idea of an international referendum on an Arctic Sanctuary, and the rapid development of clean energy that would feed a global grid.

Some remembered back to Earth Day in April, when once again people rallied in support of the referendum in September. They quoted the infamous tweet, “I give my consent. Best of luck.”

Nearly everyone remembered that magnificent day on September 12 when they participated in “the largest democratic vote in human history”. Millions of people still had pictures of themselves holding up their purple thumb.

And people remembered back to the Arctic Sanctuary conference in Paris, when for three hours they listened to experts whom they trusted, speaking to them in over one hundred languages about a future which made sense.

They remembered—Who could forget?—those six astronauts floating in the International Space Station, two of them beneath the dome with seven windows, one circling the Earth while running on a treadmill, and one in his garden with tomatoes and zinnias. They remembered those thunderstorms flashing in the clouds. They remembered the handshake. They remembered the delicate, radiant crescent moon rising over the Earth’s curving horizon as the space station sailed into the night.

Yes, 2020 was Year One, the beginning of two decades, three at the most, when humanity would make the great transition to the sun and the wind . . . and to peace, solid, permanent peace.

* * * * *

We received the most delightful news about the Snake.

His secretary at the University, who had long ago lost her patience with the self-important Dr. Henrik Ødegaard, phoned my mother (whom she had met at several University gatherings) one evening in January to let her know about the following:

A growing number of students had complained to the department that Dr. Ødegaard was often unprepared and occasionally somewhat incoherent when he gave his lectures. Further, he was often not in his office during his posted office hours, and showed no interest in student concerns when they were able to meet with him.

In addition, Dr. Ødegaard had been accused by a professor at the University of California in Berkeley of using research data without crediting that professor. Instead, Dr. Ødegaard presented the data in a published article as if *he* had done the research. When first the department, and then the University, found out about this obvious plagiarism, Dr. Ødegaard was called to appear before a University judicial committee, which ruled that he must stop teaching, and vacate his office within one week. He had been fired.

The secretary was not certain, but it was rumored that Dr. Ødegaard had departed for Stavanger, his hometown. In any case, he was gone.

My mother savored the news. Marius and I were jubilant. At my mother's suggestion, the three of us applied to change our last names to her maiden name, Jakobsen. On the day that we were granted by the Norwegian State our new identity, Sofia Jakobsen, with her two children Anna Jakobsen and Marius Jakobsen, had a celebration dinner at a seafood restaurant on the Oslo wharf, with two bottles of French red wine, *Beaujolais villages*.

Marius poured the wine elegantly.

* * * * *

Following the unprecedented success of 2020, Aili Biriita took 2021 to a new level. She explained her plan to me on a Saturday in late January when we went skiing together in the forest which wraps around Oslo. We met at Sognsvann, now frozen and covered with bright snow on a gorgeous sunny day with a cloudless blue sky and a light breeze drifting across the lake from the north. After long days in the classroom listening to lectures on the minutia of Administrative Law, I felt like a young colt let loose from the barn on the most beautiful day of winter.

The little thermometer which I carried in my backpack read minus ten degrees Celsius, my favorite temperature. The snow on the trail leading into the Nordmarka forest was fresh and dry. Thus I used a bar of Swix green wax, rubbing on a thick layer for the twenty kilometers ahead of us. I loved the kick and glide of green wax.

I noticed that Aili did not use a bar of Swix wax, or any other commercial brand. Instead, she used three different bars, bluish-brown, reddish-brown, and dark brown, which looked as if they had been homemade in a kitchen. Nor did she smooth her wax with a cork, but with a piece of tanned reindeer hide. When I asked her about her unusual wax, she muttered something in Sami . . . and said not a word more.

We swung on our backpacks, stepped into our bindings, put our gloved hands through the loops on our poles, poked the tips of our poles into the snow, then set off on the broad trail leading through towering spruce with snow-clad branches. The low winter sun behind us in the south dappled the forest ahead of us. We were early on the trail, ahead of the Saturday crowd. The law student lifted her face toward the blue sky above the trees and cheered, “Whoooo-hooooooooooooo!”

This was the first time that Aili and I had skied together. It was also the first time, I realized, that I had ever skied with a Sami. Norwegians are good skiers, for we start young, almost as soon as we can walk, which enables our ski muscles and sense of balance to develop from an early age. My mother had me out on skis making a big loop around a farm field at the edge of Ås before I had started kindergarten. By the time I was ten, we stayed at the lodge in Finse once every winter, so that the two of us, and eventually Marius as well, could ski on the high mountain plateau, and even up on the snow-covered glacier.

But I soon realized, as I began pushing with my poles and giving the skis a good kick, that starting at an early age did not give a person the same advantage as inheriting ski muscles which had been developed over thousands of years. I was setting out on a run of twenty kilometers; Aili, I am sure, could easily have covered a hundred kilometers, finishing by the light of the moon.

She would look back at me once in a while, and occasionally she would pause to let me catch up. Once, while I stood puffing, she told me that when the reindeer moved at night across the snowy tundra in April toward the summer feeding grounds, every Sami had to keep up with the herd. “And the reindeer,” she said with a smile of amusement, “do not pause for hot chocolate and oranges.”

At one point, we left the main trail to follow a smaller trail to a long wilderness lake covered with half a meter of snow. We saw the tracks of other skiers who had

crossed the lake from end to end, but Aili wanted to break her own trail. She did not mind that the little Norwegian city girl followed in her tracks.

When we approached Ullevålseter, a wonderful old rustic café deep in the forest—part of a farm run by the same family for generations—Aili asked if I would like to stop for a waffle and a cup of coffee. That was Aili: always out in front, but always making sure that her apprentice could keep up.

“Ollu giitu,” said the apprentice. “That would be wonderful.”

We took off our skis and leaned them against the wooden building. A shaggy white horse ambled over to say hello. This horse, looking very much like the mythical white horse in a Kittelsen painting, was notorious for walking up to a picnic table during the summer when hikers were having their lunch. While a delighted hiker was petting the horse, White Mist would reach out with his long neck and grab the waffle off a plate, then amble off across the lawn, never mind the cries of protest.

Aili and I kicked the snow from our boots and walked into the café, which smelled of wood smoke from the fireplace, mixed with the scent of ancient timber beams, and coffee, and . . . hot chili soup.

We put our coats over the backs of two chairs at a table near the fireplace, then walked—passing a young mother and father with their twin infants, who had made the journey in backpacks—to the counter, where I greeted the woman whom I had greeted since I was ten years old. I asked her if she herself had made the chili soup.

“My mother, in the kitchen,” she said, with a nod toward a white-haired woman working at a stove in the adjoining kitchen. “She’s been up since five.”

“Wonderful,” I said. “Tell her thank you.”

“I will.”

Aili and I carried our trays laden with waffles and soup bowls and homemade bread and cups of coffee to our table. I sat with a sigh of comfort. The table was warm, when I laid my hands on it, from the fire.

Aili left for a moment, then came back with two large glasses of water, very cold, flavored by the well from which the water had just come.

I had finished my waffle and first cup of coffee, and was dipping pieces of bread into the chili, when Aili said to me, “Anna, we are making progress. We are developing new ways of thinking.”

New ways of thinking. Not a revolution, but a Renaissance.

“The White Caps are weaving schools together, so successfully that now the students are doing it themselves. Over ten thousand grade schools, high schools, colleges and universities are now on our contact list. A student in the Caribbean doing research on mangroves can very quickly find thirty schools around the world where other students are doing research on mangroves. Such a thing never existed before. This is the global classroom.

“Never before has a generation of young people grown up together, sharing both the problems and the solutions. Think what they will do when the eighteen-year-olds of today become thirty years old, with a global network. The rate of progress will accelerate. They will dream *big* dreams. And they won’t have time for some idiot’s next war.”

She broke off a piece of bread and dipped it into her chili, as I was doing. With a quiet laugh, she said, “We learn from each other.”

I didn’t say anything. Aili was speaking now, and I had learned a long time ago that my job was to listen.

“Anna, we are learning to think in terms of a global community. We never did such a thing before. This is part of the Renaissance.

“And . . . we are learning to think in a new way about planet Earth. We are learning that there is an eleventh commandment: ‘Thou shalt not plunder.’ Moses did not get that far, because the seas were still full of fish.

“We are learning that our strongest ally is the Earth herself, if she is healthy. She will heal herself, and she will feed us abundantly, if we work *with* her. Native peoples know that. And now the young people are learning. Within a decade, every business school textbook on economics will begin with a chapter about planet Earth.”

She dipped another piece of bread into her chili. So did I.

“Anna, the Arctic Sanctuary was just the first step. No oil, no nukes, no battleships. Instead, we let Mother Nature be the boss.

“We replicate that model in smaller sanctuaries around the world. Until eventually, the sanctuaries, biologically flourishing and *economically* flourishing, grow larger and larger until they begin to touch each other. Oh, I want to see that day, when half the world is a protected garden, and the other half isn’t far behind.

“Then the global classroom is as much outdoors as it is indoors. And kids will have a purpose while they are growing up. They won’t spend the day sitting inside, exercising their thumbs.”

The four people at the next table were listening. They were two middle-aged couples, dressed for a day on skis. Perhaps they had kids at home, exercising their thumbs.

“But Anna, that’s not enough. This past Christmas, after we came back from Paris, I went with my family to our beautiful little church in Guavdageaidnu. And while the two ministers were speaking, one in Norwegian, the other in Sami, about a child who brought a new message to the world, I wondered what it was that made this message so powerful. So long-lasting. Two thousand years later, we still keep reminding ourselves about that message.

“Because, you see, it’s not just the speaker. It’s the listeners as well. They *need* something, and they respond to someone who tells them about that something. Look at the world back then. You can read the Old Testament, or you can read a history book, and you will find the same thing: centuries of endless wars. Tribes fought tribes, kings fought kings, empires fought empires, slaughtering each other endlessly. And then an obscure carpenter with a talent for speaking tells a group of people, ‘Blessed are the peacemakers, for they shall be called the Children of God.’

“The group grows into a crowd, under the watchful eye of the Roman imperialists and the Hebrew hierarchy. Why is this man so increasingly popular? Because he offers the common people eternal life? Well, maybe. Because he offers them salvation from their sins? Possibly. Because he offers them prosperity? No. Because he offers them freedom from their oppressors? No.

“What then was it that drew the crowds? Somehow, this wandering preacher struck a chord deep inside them. What was it that he was able to touch, to kindle, to awaken?”

Beside me, a young man placed a couple of logs on the fire.

“Anna, he awakened their deep, ancient need for peace. They had given up for so long, for so many generations, because their own history had taught them nothing else. Roman soldiers were a part of daily life. Slaves who had been conquered in this or that war were a part of daily life. Refugees who spoke their own languages and who lived together in this or that part of town, were a part of daily life. Young men drafted into somebody’s army, then forced to march off to some distant war: that was a part of life. News that someone had died on some battlefield: that was a part of life. Death was a part of life, again and again and again.

“And then this man came along and talked about peace. The most ancient hunger in the world, was for peace.”

I could feel the warmth of the fire blazing up.

“So you know what I want to do, Anna? I want to repeat the model that worked in the year 2020: huge rallies on International Women’s Day in March, huge rallies on Earth Day in April, a summer when the young people of the world knock on a billion doors, and then a referendum in September of 2021. A referendum which enables people around the world, for the first time in human history, to vote on a fundamental question: Do you want peace, now and forever?

“When three billion people, maybe four billion this time, maybe even five, hold up their purple thumbs and tell the world, ‘I voted for *peace*,’ then we are more than half-way there. Because once they’ve grabbed hold of that idea, grabbed hold of it because they believe it—that peace *is* possible—nothing will stop them until the final gun falls silent. They simply will not tolerate that old shit any more.

“They will *build* a strong and permanent peace. They will become architects of peace, and their structure will be as strong and as beautiful and as long-lasting as that cathedral in Paris.”

She looked at me with absolute determination in her dark eyes.

“If 2021 can build on the momentum of 2020, then we can build for the rest of the century on those two historic years.”

Build for the rest of the century.

“Aili,” I said, “let’s see if we can get five billion purple thumbs this time.”

We skied during the rest of that day through towering spruce and sun-dappled snow, pausing for the picnic which we carried in our backpacks, and pausing once again for oranges and hot cocoa. Aili skied at a more relaxed pace; she had said what she wanted to say, and now she could glide through the forest like an ancient Sami sprite.

The winter sun would set at around four o’clock. We emerged from the forest at the north end of Sognsvann in time to see a red ball above the black trees at the southwest end of the lake. Rather than ski on the trail to our starting point, Aili led me down a smaller path to the lake, then, avoiding the other tracks, broke her own trail through fluffy snow that glowed faintly red in the last few minutes of daylight.

She skied now at a walk, so that by the time we reached the middle of the lake, the first bright stars were appearing in the purple-black sky.

I did not follow in her tracks, but skied side-by-side with her, breaking my own trail.

By the time we reached the southern shore of the lake, the sky above us was radiant with stars. The snow was charcoal-gray.

Before we climbed the gentle slope where the shore wrapped around the lake, Aili and I turned around on our skis and looked back at the lake, at the twin pairs of tracks, and at the vast night sky that shimmered like a blessing above us.

“Ollu giitu,” called Aili, her voice almost singing.

I called as well, my voice almost singing, “Ollu giitu.”

Chapter Forty-Three

My mother phoned me in early February during my lunch hour at the law school with extraordinary news. She had just been promoted to Head Nurse in the premature infant ward, an enormous honor. After working for eighteen years at the National Hospital in Oslo—during which she took enough professional courses at the University to earn a master’s degree, and during which she worked countless night shifts—my mother was now in charge of one of the most important wards in the hospital.

She was thrilled; I was exuberant.

“Mom, how many babies have you kept alive during those eighteen years?”

“I don’t know, Sweetheart. I never counted, I just watched their heartbeats.”

She explained that the hospital was going to honor her promotion with a ceremony on Friday afternoon, two o’clock. She hoped that both Marius and I could skip classes so that we could be there.

“Of *course* I’ll be there. Oh, I’m so *proud* of you.”

“Thank you, Anna. I’ll see you on Friday, one-thirty at the premie ward desk.”

And so it came to pass, that on Friday afternoon, February 5, 2021, Marius and I met our mother in the waiting room of the Premature Infant Ward (premie ward), where people were setting up a speaker’s podium and folding chairs. My mother wore her usual blue nursing outfit, whereas I wore one of my nicest dresses, and Marius (bless him) wore a coat and tie!

The waiting room was separated by a wall of windows from the large room where twenty-five incubators—plastic boxes with cords and tubes connected to various monitors and respiration machines—were neatly arranged on twenty-five small tables. Most of the incubators had a tiny occupant inside, with tubes and patches attached to their small pink bodies. Born too soon, or born with life-threatening disabilities, they were kept alive by the constant attention of top professionals, who could see with a glance at the monitor that a heart was weakening, or a temperature was rising.

Here was the place which my mother called “my second home”. She walked for hours among those incubators, then she came out to the waiting room to meet with the worried parents. And every once in a while, when an infant simply did not have the strength and finally died, she spent time in the hospital chapel. “Just ten minutes,” as she once told me, “then I have to be back on the ward.”

A young man in a white coat was leaning over one of the incubators and making notes on his clipboard. He had a nice face, pensive, concerned.

My mother noticed me looking at him. “That’s Erling,” she said. “He’s a fourth year medical student. He wants to specialize in OBGYN (obstetrics and gynecology), so he puts in extra hours visiting us every afternoon.”

“Erling,” I said.

“I invited him to the ceremony. Would you like to meet him?”

“Well . . .”

Someone called to my mother and she hurried off.

So I was left alone—Marius was across the room, inspecting the snack table—able to look inconspicuously through the window at a young man who was going to devote his life taking care of women and babies. A young man with dark hair in need of a haircut. He had nice shoulders; maybe he lifted weights in a gym. And a pensive face, as if he were not simply inspecting each infant, but asking questions, seeking answers.

The ceremony was extraordinary. The seats were filled with people in hospital blues and people in ordinary clothes. Marius and I sat in the front row. Erling sat a few rows behind us. My mother sat in one of the chairs for the dignitaries near the podium, facing us. She seemed both proud and a bit embarrassed.

The director of the hospital spoke first. She praised not only my mother, but all of the workers in the PIW (premature infant ward) for doing “difficult, demanding jobs with the highest level of professional expertise.”

“You are like rescuers in a lifeboat out on a stormy sea. These tiny infants, tossed in the storm waves, nearly dead from exhaustion, reach out to you. And you reach to them over the sides of your little rescue boat, you grab hold of them, and you lift them into safety. Then you *keep* them safe while you carry them through the waves and the wind all the way to shore. You are heroes, every day, and we are all deeply grateful for the work that you do.”

Several of my mother’s colleagues on the ward spoke, praising her not only as a superb nurse, always calm, always reliable, but as a wonderful friend as well.

Now my mother spoke, thanking the hospital for this honor, and thanking her colleagues for their “magnificent work during all of our years together.”

She was just about to sit down when a girl about ten years old walked forward with a bouquet of red roses.

My mother hesitated beside the podium. Clearly the roses were for her.

The dignitaries looked on with surprise. This was an unscheduled event in the program.

The girl stood in front of my mother. She was a bit shy, but she spoke loudly enough that everyone could hear her when she told my mother, “Mrs. Jakobsen, my name is Anna Maria Kjelling. I am nine years old. I will be ten on the fifteenth of March.”

She paused, staring up at my mother.

‘On the fifteen of March, in the year 2011, you kept me alive. I was born six weeks early. My mother,’ she turned and pointed at a woman who now stood up in

the audience and put her hands over her heart as she bowed to my mother, “came to this hospital in an ambulance. It was at night. You were here. And you kept me alive. So . . . I would like to give you these roses.”

She handed the bouquet to my mother, who took the flowers, then knelt down and wrapped her free arm around Anna Maria, hugging her.

I couldn’t hear everything she said, but I did catch the word “Sweetheart.”

Then my mother stood up with her bouquet of red roses and the girl hurried back to her seat, where her mother gave her a second hug.

As my mother took her seat with the dignitaries, she glanced at Marius and me. We were quietly applauding.

After the ceremony, a dozen people, including Anna Maria’s mother, wanted to talk with Sofia Jakobsen. Marius parked himself at the snack table.

While my mother was speaking with Erling, who warmly congratulated her and told her how helpful she had been to him, I drifted over so that my mother could see me.

When she did, she smiled and said, “Anna, I would like you to meet Erling. He is our star medical student. He has the gift of Diagnosis, one of the most important talents a doctor can have. He reads the charts, he watches the monitors, he makes his own examination, and then he reads very deeply into each case.”

“Well, well, well,” said Erling. “Isn’t that what we’re trained to do?”

“Oh, but you have the gift,” said my mother. Then she touched my shoulder and said, “Erling, this is my daughter Anna. She is a law student at the University of Oslo. She is working toward a master’s degree in human rights.”

“Human rights,” said Erling with interest. He looked at me with eyes no longer pensive, but very pleased.

My mother continued, “Anna and I have worked as volunteers on a beach on the Greek island of Lesbos, helping the refugees when they arrived at night in their little rubber boats.”

Now there was a glint of respect in his eyes. “That’s the sort of work I’d like to do. I’ve signed up with Doctors Without Borders, and hope that this summer, they will ship me out to where I can be of some use.”

Doctors Without Borders. They had been on that beach with us when the refugees came ashore. Nikos, the Greek lifeguard who had placed Lamar into my arms, knew them all by name.

I said, because I needed to say something, “I hope they find you a good assignment. I am sure you will do extremely well.”

He frowned. “I hear that sometimes babies are born in those rubber rafts during the crossing. Those poor mothers. And what kind of world is it that we live in?”

“Anna will tell you,” said my mother. “That’s exactly the question that she works with every day.”

And then someone else wanted my mother’s attention, leaving me and Erling to carry on the conversation alone.

It wasn’t hard. We were still talking half an hour later when people began to leave. My mother appeared with Marius, whom she introduced to Erling.

“This is my son Marius. He wants to become a marine biologist and study the coral reefs of Tahiti. Have you heard of the great French oceanographer, Jacques Cousteau? Marius is reading his book now, in *French*.”

“Tahiti!” exclaimed Erling. “That’s my dream destination. I want to sail there.”

Marius looked at this friend of his mother’s with amazement. “You want to sail to Tahiti?”

“I sure do.” Erling gave Marius an appraising look. “I might need some crew.”

Marius stared at Erling. He had never been aboard a sailboat. He didn’t say a word.

“Well,” said Erling, looking at his watch. “I’ve got another couple of hours of rounds. But I think that this occasion,” he nodded to my mother, “your *promotion*, deserves a bit of celebration. I’m going to attend a concert tonight at the Oslo Concert Hall, and I’m quite certain that I can arrange for three more seats. They are very special seats, for a very special concert. Tchaikovsky’s violin concerto, with the Oslo Philharmonic Orchestra and a superb soloist from the Netherlands, Janine Jansen. Please, I hope you will join me.”

I hesitated to say anything. I let my mother respond.

She announced, “Erling, we’d be thrilled to join you. What time is the concert?”

“Seven o’clock. We should be there by six-thirty. I always like to be early before a concert. I love to hear the orchestra warming up.”

“Well, that would give us time to take the train to Ås, put on something other than my hospital blues, grab something to eat, and we can be back at National Theater station by 6:25. At the Oslo Concert Hall by 6:30 sharp.”

“Perfect,” said Erling. He looked at me, looked at Marius, clearly happy that we were going to join him.

Then he said, “I’m due in Urinary in five minutes. You’ll have to excuse me.”

“Fine,” said my mother. “See you at 6:30. Thank you so much.”

“My pleasure.” And then he hurried out the door.

I looked at my mother.

She laughed. “Now you’re in trouble.”

“With Erling?”

“No. With your own heart.”

And that is all she would say.

* * * * *

Erling was waiting outside the Concert Hall door as we approached, wearing a black suit and blue tie. My mother was right. I was in trouble.

He showed us a fan of four tickets. "Great seats," he said. Then he led us through the lobby, bustling with people, to the coat room, where we took off our winter coats and boots and—my mother and I—slipped on our dress shoes.

I had been to the Concert Hall many times with my mother and knew both the ground floor and balcony well, so I was puzzled when Erling led us to a set of steps at the back of the Concert Hall. Up we went, one flight, two flights, then down a short corridor and through a door to . . . We were *behind* the orchestra, and high above it, at the top of the bank of steps where the choir stands for the choral works.

"We're going down to the first row, on the left," said Erling. "Watch your step."

We went down a central aisle. Half the seats were already filled. At the bottom, Erling swept his arm toward four seats in the front row, marked with four sheets of paper on which he had written, "RESERVED".

"Best seats in the house," he said. "We'll be a couple of meters behind the basses and the trombones, and a little bit above them. The timpani will be just to our right. The great thing about these seats is that the conductor is facing *us*, so that during the entire concert, we can watch him working with the orchestra."

I glanced at my mother. She was extremely pleased. And so was I, to be in the company of a man who was so . . . competent.

"Thank you, Erling," I said. "This is perfect."

"*And*," he said, "the violin soloist will stand to the right of the conductor, turning toward him. That's why we're on the left side. She'll be turning toward us as well."

"All right," said my mother, "I'll sit here," she pointed at the seat furthest to the left. "Then Anna, then Erling, then Marius. How's that?" She sat down.

And so Marius sat to Erling's right, and I to his left. As the members of the orchestra walked onto the stage, took their seats and began tuning their instruments, Erling spoke primarily with Marius, pointing out the oboe, the flutes, the bassoon. The trumpets, the French horns.

"French horns?" asked Marius. "Were they invented in France?"

"Well, we'd have to look up their history. But I imagine they developed from hunting horns, which could have been French hunting horns to begin with."

"Hmm."

Erling pointed out to Marius that when the entire orchestra tuned together, they began by listening to the oboe, which had the most consistent note. Sure enough, we heard the distinctive high sound of the oboe, followed by the concertmaster on his violin, and then by all of the rest of the instruments. Erling seemed to savor that moment, when everyone came into tune with each other.

Then the instruments quieted. The lights over the audience dimmed. An announcement over the speaker system asked people to turn off their telephones.

We waited. A few people coughed.

Erling pointed and whispered to Marius, “Watch that door to the right of the stage. The conductor will come out there.”

Sure enough, a few moments later, the Estonian conductor, Paavo Järvi, emerged from the door to the applause of the audience. He walked smartly across the stage, stepped up on the conductor’s podium, bowed to the audience, turned toward the orchestra and bowed to us in our perfect seats. Then he raised his baton and led the orchestra through Mussorgsky’s “Night on Bald Mountain”.

As the frenzied strings portrayed the wild spirits up on the mountain, and the horns roared in the background, Erling pointed now and then without speaking toward various instruments, so that Marius could watch them playing.

Toward the end of the short piece, Marius sat entranced as the chimes, only a few meters from us, rang their balm of peace, backed—Erling pointed—by a harp.

After a short pause, Järvi conducted the second piece in this All-Russian concert, also by Mussorgsky, “Pictures at an Exhibition”. We listened to a series of short tone-poems, each with its own pace and mood. Various individual instruments stood out distinctly: the brass rumbled with deep Russian strength, the flute sang wistfully, the violins searched the ancient melancholy soul.

Erling no longer pointed out the instruments. He and Marius—all four of us—quietly listened, utterly entranced.

During the intermission, Erling led us to a little café which I had never seen before; it served the people from the choral seats, so it was not nearly as crowded as the main café. Nor was it as noisy. While we had coffee and a piece of cake—Marius had cider and two pieces of cake—we had ten minutes to talk with each other.

“Where are you from, Erling?” asked my mother. “Are you an Oslo boy?”

“Oh no,” he said, “I’m from the little seaside village of Halden, on the border with Sweden.”

“Halden. The Oslo-Halden train goes right through Ås once an hour, but it doesn’t stop.”

He laughed. “No, we’re all in too much of a hurry to get home.”

“What was it like, growing up in Halden by the Oslo Fjord?”

“It was a boy’s heaven. My grandfather taught me how to sail in an old wooden boat. By the time I was fifteen, I could handle the tiller in all kinds of weather. We still go out sailing, though I’ve got a bigger boat now.”

I saw, for the first time, a sadness in Erling’s face. But of course, I couldn’t ask him why.

Then he brightened. “Maybe, in the spring, you’d like to come down to Halden and go out sailing. Marius, I’ll teach you how to work the jib sheets.”

I glanced at my mother. She was watching this young man who reached out to a boy . . . who never had much of a father, and now had no father at all.

The ringing of bells from speakers in the ceiling called us back to our seats. We finished our coffee, then returned to our perfect seats, front row on the left, ready for the third and final part of the concert, Peter Tchaikovsky’s great “Violin Concerto”.

The audience applauded as first Janine Jansen from the Netherlands, and then a short distance behind her, Paavo Järvi from Estonia, walked across the stage and bowed to the audience. The conductor stepped up on his podium. The violinist stood (from our perspective) to his right, turning part way toward him.

The conductor raised his baton.

And then began the music that was far more than music: it was energy in the form of music, beginning quietly, like lighting in the distance, but moving quickly toward us, bold, irrepressible, growing and growing in power, so that we did not merely listen . . . we were carried by waves of energy, lifted by them, held for a moment at some extraordinary peak, then gently lowered down again until the violin grabbed us once more and hoisted us up in the whirlwind.

The huge, complex voice of the orchestra was only meters away from us. The flute was as crystal clear as if a singing bird were sitting on my shoulder. I marveled at the range of sounds which that swaying slender woman could produce with her violin, some high and clear and faintly trembling, some low and almost growling. Even when the orchestra was at full volume, we could hear the violin rising above it, like a cry in the blast of a storm.

At the end of the first movement, the audience did what audiences rarely do until the very end of the piece: they applauded. Erling clapped; Marius followed his lead. So did my mother and I.

The second movement opened with exquisite woodwinds playing a gentle passage, like the gracious sweep of an arm to the violin, who now took us deep into the sadness, the aching, the longing, which is so much a part of the Russian soul. The people who have vanished into the maw of some distant war; the vast flat land beneath a leaden-gray sky; the hope for some better life, forever unfulfilled; an infinite ocean of sadness underlies the bright moments as brief and faint as the stars in the sky.

Now the flute takes up the mournful theme . . . before the violin, with growing Russian strength, lifts up the entire orchestra and begins to stride forward with firm resolution, with purpose.

The tempo slows with growing expectation.

And now, without a pause, the third movement explodes with the orchestra proclaiming a new dawn at full volume. The violin, filled with irrepressible energy, rises up with the fiery spirit of that other side of the Russian soul: the unconquerable hero, who shakes his fist at all adversity. Strength, woven with ribbons of joy, pours out of the violinist. She beckons to the orchestra: Come along, come along, the day is not done yet.

The energy builds. Then subsides into a plaintive quietude, restless, refusing to halt the relentless march forward.

With a burst, the violin shows us all what a true virtuoso can do. The orchestra lifts her up to a celestial height and then launches her, blazing, into the heavens. With fingers moving faster than one could think possible, and the bow attacking, attacking, the violinist sweeps us all up into the heavens with her, so that we share, through the driving finale, her enormous triumph.

A moment of silence, and then the audience roars. We can see the smile on Järvi's face as Janine Jansen kisses both his cheeks. She shakes hands with the concert violinist, who has led the strings magnificently. She bows to the audience; we hear calls of "Bravo! Bravo!"

Erling stands up, then gestures for Marius to stand up. Erling cups his hands and calls, "Bravo!" Marius cups his hands and calls, "Bravo!" Janine Jansen turns toward us, sees the two, a man and a boy; she gives them a smile and a short bow.

It was a moment in history.

The conductor and the violinist leave the stage, but soon return. The audience is on their feet, thundering with applause. Our little audience behind the orchestra, yes, we are on our feet as well. A trombone player in the back row of the orchestra turns around and gives us a smile.

We walked, the four of us in our winter coats and boots, from the Concert Hall to National Theater train station, where we took the first train to Oslo Central Station, so that Erling could catch his train to Halden and we could catch our train to Ås. Erling and Marius swapped email addresses.

I, boldly, invited Erling to meet me one late afternoon next week at the White Caps headquarters, after my classes and his rounds. I had met him in the premie ward; now I wanted him to join me in my world. And I wanted him to meet Aili. Actually, I wanted Aili to meet *him*. I wanted her blessing.

He said that he would be very glad to meet the White Caps. "What about Wednesday afternoon? At five o'clock?"

"Perfect." I wrote the address for him on his concert program, and discretely added my own email address.

My heart was thumping like a tympani.

Erling's train departed first. The three of us stood on the cold platform and waved to him; he waved back through the window, and then the red train pulled out of the station. He was gone, but not forever.

Our train, the Old Reliable to Moss, boarding from platform nine, departed at 10:18. We walked further out on the platform so that we could board the first car, far from the station and thus almost empty. We sat in the little elevated section at the very front of the train, Marius and I facing forward, our mother facing us, the window looking out at Oslo on a winter's night.

No one else joined us in our private compartment.

Such a day, such an evening, and we had shared it together.

We were quiet as the train pulled out of the station. When the train curved to the right, traveling south, we could see—dark and dim, but discernible—the lights of a ferry crossing the Oslo Fjord. Marius stared out the window at the ferry, then he said to his mother, “Erling wants to sail to Tahiti.”

“Yes,” she said, smiling at him with enormous love in her eyes, “and he says that he might need some crew.”

Chapter Forty-Four

The women of France were once more mounting the barricades.

Aili Biriita and Marcelline had been corresponding back and forth, discussing International Women’s Day in March. Marcelline had been deeply impressed, during the Arctic Sanctuary conference in December, by the words of the scientist from Pakistan, “Peoples of the world, hear me: we are tired of your wars.” Aqeelah Aamir had spoken briefly about the *cost* of these unrelenting wars. Here was a theme that should be developed by the people who were deeply tired of this male nonsense. International Women’s Day would address the themes of war, and especially . . . of peace.

At the White Caps headquarters on Monday afternoon, February 8, 2021, Aili showed me the four statements which would be announced at rallies around the world on Saturday, March 6. People would vote on these statements at the second global referendum in September.

Rather than answer “Yes” or “No” to questions, people would check “Agree” or “Disagree” in response to the four statements. It was a way of encouraging people to think deeply about each of the four proposals.

Aili gave me a printed copy of Marcelline’s email. I read:

1. No weapon shall be sold or smuggled across the border of the country where it was manufactured. Thus the international weapons trade shall be banned, forever.

Agree _____, or Disagree_____.

2. Nuclear weapons shall be reduced in number until, within this decade (by 2031), they are eliminated. Strict verification shall monitor the eradication of nuclear weapons, and shall prevent the manufacture of any new nuclear weapons or their components.

Agree _____, or Disagree _____.

3. I will fight no wars beyond the borders of my own country.

Agree _____, or Disagree _____.

4. I support the termination of all wars, forever. I support as well a world in which every person has the right to live in peace, forever.

Agree _____, or Disagree _____.

On Referendum Day in September, 2021, the peoples of the world would once again vote on an issue urgently important to all of them: how to stop the wars which had plagued mankind since before recorded history. And how to design and build (with the help of the sun, with the help of the wind) a just and permanent peace.

The referendum would not be legally binding. Wars were not going to immediately stop in September.

But if three billion people, maybe four, maybe even five, declared to their governments that the time had come to end this ancient barbarity, the governments would either listen, or find themselves replaced at the next election.

Once the peoples of the world held the possibility of peace firmly in their minds, there would be no stopping them.

I asked Aili what she would speak about at the Oslo rally in March.

“The cost of war,” she said. “I’m adding up the cost.”

* * * * *

I must have been more attentive in church than I thought. Because while I was sitting in class the next day, listening to the multitude of ways that people could bicker with each other, and listening as well (since this was law school) to the multitude of ways that people could resolve their bickering, I began to write a series of short notes in my notebook. I would take a well-known phrase from the Bible, then change it a bit, inserting the word “peace”.

And God said, “Let there be peace.”

Blessed are the peacemakers,
For they shall prepare the world
For the coming of your children.

And so on. By the time class ended, I had ten of them. I was not sure what they were, but I thought that I might show them to Aili.

At the White Caps headquarters that Tuesday afternoon, I gave Aili a sheet of paper on which I had typed my ten . . . somethings.

She read them very slowly, glanced up at me, then walked to a window and read them again.

Finally she came over to me and said, “Anna, I’d like you to read these at the rally in March.”

“Read them?” Surely she didn’t mean that I—

“You can speak just before I speak. I’ll ask the Oslo committee to put you on the agenda.”

“But Aili, I’ve never spoken—”

“You’ve got to *speak*, Anna, to your audience. Not just mumble into your notes like these miserable academics. You’ve got to grip that microphone and *speak* as if you believe each word from the bottom of your soul.”

She handed me the sheet of paper.

“Anna, I knew on the day that I met you at the Center for Human Rights, when you told us about carrying that little girl on the beach at night, that one day you would speak.”

She looked at me with her all-knowing Sami eyes.

“Anna, the world is waiting.”

Chapter Forty-Five

Because of my father, I never had a boyfriend. My mother had told me that when she first met Henrik at the University of Oslo—when they were “courting”, as she called it—he had been such a gentleman. But once they were married, he became more and more domineering. If she tried to discuss this conception of his that he was “the boss”, he would become immediately irritated, and then one day he was suddenly shouting at her.

Initially he welcomed their first child, a daughter. But he was impatient with her noise, her demands in the middle of the night. My mother took over the duties of raising a small child, while he became increasingly distant.

Marius is eight years younger than I am because she was afraid of bringing another child into this unhappy family. But then, despite her efforts, she became pregnant again . . . and found that she was delighted to have her small family of three: a very helpful eight-year-old daughter, and an infant boy whom she called “my Sunshine”.

Henrik had only two modes of behavior: he was either silent (he loved to stare at the television, blocking out the rest of us), or he was angry. So I stayed away from him. When he came home in the late afternoon from the University in Ås, I quickly disappeared into my bedroom, where I had a desk, a bookshelf full of books, and a rocking chair with a tall lamp beside it where I could read for hours, far from the tension at the other end of the house.

Marius learned as well to stay away from his father. He had his toys in his bedroom, and gradually a growing collection of books. That left my mother alone out in the kitchen, trying to keep the peace with a man who “refused to talk”.

Marius, when he was about nine years old, shifted from books to videos. He had a couple of friends who would give him their old videos after they had watched them. Cartoon videos evolved, as my mother discovered one day, into war game videos. When she asked Marius why he would want to watch video games in which the purpose was to “shoot and kill countless enemies”—she had done some research at a video shop in a mall and was horrified at what they were selling to the kids—Marius told her that he wasn’t hurting anyone. It was just a game. All the kids did it.

So his bedroom became his cave, where he wore headphones and blasted his enemies, while his real enemy, who refused to talk with him or even acknowledge his existence, sat staring at a television in another room, ten meters away.

I watched my mother as she tried desperately to provide a peaceful home for her children. And I became increasingly bored in high school. I saw no purpose in learning about calculus (a pointless, useless mathematical system), or chemistry (with its complicated benzene rings), or history (did I really need to know about gassing people at Auschwitz?), or literature (“Pan” by Knut Hamsun was the stupidest book I had ever read, especially at the end when the guy shoots his dog). No, I saw no purpose in any of that, when everything at home was so horrible.

So the last thing in the world that I needed was a boyfriend. Even after the Snake had left us, and I was a student at the law school with a genuine purpose, I made no effort to get to know any of the guys in my classes. Once in a while someone would ask me about the White Caps, and I was glad to explain what we were doing. But then that was the end of it. Students in law school are basically busy getting ready for the next exam.

And then Erling took the three of us to the Tchaikovsky concert, and pointed out the flute and the oboe and the French horns so that Marius—no lover of classical music—could understand how a symphony works.

Erling was at the ceremony to honor my mother’s promotion, because he had gotten to know her at the hospital . . . because he was making, as a medical student, the extra effort to understand those premature babies in their incubators.

At the train station after the concert, Erling had seemed genuinely interested in meeting me on Wednesday afternoon at the White Caps headquarters, so that he could learn about what we were doing there.

If he had said no, he was really busy right now . . . that would have been the end of Erling.

And so it came to pass that on Wednesday afternoon, February 10, 2021, I stood, wearing my white cap, outside the door to St. Olavs Gate 21B at 4:45 (fifteen minutes early, in case he came early) as the winter evening darkened the sky above the street. I was a little nervous. What was he going to think about my thirty colleagues from countries around the world, some of them wearing the knit white caps, as they sat at computers corresponding with students in the growing Weaving of Schools network, and with women who wanted to know how they could help to develop something as simple as Peace in the world? Would he think that we were all just a bunch of crazy Do-Gooders?

And what would Aili think of Erling? What would Erling think of Aili?

“Anna!”

I looked to the right and saw him coming up the street in his red winter jacket, smiling as he waved. He carried a briefcase.

I hadn’t seen him since Friday evening at the train station. We had known each other for less than a week.

My heart was beating like a tympani.

“Erling!”

I held out my hand.

He set down his briefcase on the icy sidewalk, took off his glove and shook my hand. “I found you.” He glanced at my white cap.

“Yes, you’re right on time.”

He held my hand. “Yes, and I’ve got all the time in the world. I’m very intrigued by your White Caps. I found your website. You’re doing extraordinary work. Especially the Weaving of Schools. What a great idea.”

“Well, come on up. We’re on the second floor.”

He squeezed my hand, then let go and picked up his briefcase. I led him through the door and up the stairs to our second floor headquarters, crowded to capacity by people working at several large tables on their laptops. On the walls were maps of the world, maps of countries, of cities, of mountain ranges, of deserts, of jungles, of Pacific islands. And calendars in various languages, with pictures from Mongolia and Cuba and Tierra del Fuego. Most prominent of all was a large color photograph, taken from a satellite, of the Arctic ice cap and the growing body of water that surrounded it, set against the absolute black of space.

While we took off our coats and hung them on a rack, I glanced around the room for Aili. She was at the far end of the room, working with the Mother Tongues.

Almost everyone was wearing a white cap.

“Hey Anna,” called Kamal from Nepal, his bright eyes beaming, as always, with humor. “Who’s that gorgeous dude you’re with today?”

I could feel myself blushing. Now the others were looking toward Erling and me as we stood by the coat rack. This was the first time they had seen me with . . . a man.

Bravely, with a good strong voice, I said, “Fellow White Caps, I would like to introduce my friend Erling. He is a medical student, affiliated with Doctors Without

Borders. He is interested in learning from you about our work here. Would anyone like to explain to Erling what you are working on?"

Several hands went up. Two people stood up and beckoned him over.

And so began a full hour of moving, the two of us together, from this spot to that spot around the crowded room, so that my colleagues could show Erling maps and pictures and information charts on their laptop screens. It wasn't just the information; it was the *energy* with which they explained their work. One White Cap from Ethiopia showed Erling a video made by students at a high school of their tree-planting project around a desert village. The students in the video spoke their best English as they explained their underground watering system, which lost no water by evaporation in the hot African sun.

Erling was full of questions. He grasped immediately the essence of what the White Caps were doing, then he wanted to know the details. He was especially intrigued by the cooperation between clean energy companies and schools, and with refugee camps. An Indian solar energy company was donating solar panels to hundreds of schools and medical clinics in rural India. Erling stared at a picture of an operating room in a clinic in the mountains of northern India, where a doctor was performing a surgery; the lights, the monitors, every instrument in the clinic was powered by the sun.

He looked at me with admiration. "I had no idea there was so much progress going on out there."

I asked Mohammad to show Erling pictures of a refugee camp in Jordan. Erling looked at a picture of a vast camp with tents reaching to the horizon. Mohammad told him, "Jordan hosts almost three-quarters of a million refugees. Jordan thus hosts the second highest number of refugees per capita in the world: 89 per 1,000 Jordanians. Ninety percent of those refugees have fled from the war in Syria." He paused, then he said again, "From the war in Syria. When will these poor people ever be able to go home?"

Mohammad clicked to another picture, of a large array of solar panels at the edge of the camp. "Erling, I want you to know that Jordan has made enormous efforts, so that my country is now the home of the first refugee camp in the world powered by clean energy. The first in the world! Since the inauguration of the solar plant in May of 2017, Azraq refugee camp has been powered by the sun. People living in poverty at least have lights, and a clean, safe stove, a small refrigerator, a radio, and a means to recharge their telephones. But Erling, it's more than that. When

these people, who have lost everything, have reliable power from the sun, they have *dignity*. And *hope*. They are not sitting in a dark, dusty tent, without a fan in the summer, without a heater in the winter. The children can do their homework. They have a glimmer of hope for their future.”

“Good work, Mohammad,” said Erling quietly. “Good work.”

After a full hour, we had made our way around the room. Erling looked at me and asked, “Anna, what do you do here? Your mother told me about your work with refugees on the island of Lesbos. Is that something you want to pursue, with a degree in human rights?”

I was just about to explain a research project I had in mind, when I heard Aili, standing behind us, say, “Anna is going to speak at the International Women’s Day rally in Oslo in March. Anna, I have just learned that the BBC from London will be covering the rally, as well as BFM TV from France, and Euro News. All of Europe is going to watch you read your ‘Gospel of Peace’.”

Erling looked at Aili, then at me. “Your ‘Gospel of Peace’?”

“Well, I—”

“Anna,” said Aili, “I need you to send ‘The Gospel of Peace’ to me by email. Then I can give it to the Mother Tongues. I want to have the translations ready and on our website on Saturday, March 6, the day of the rally. We’ll put your ten verses up on the giant screens while you read them, with your name, of course, and with a note at the end that ‘The Gospel of Peace’ can be downloaded and printed for free in a multitude of languages, by going to our website. I think that you will have many readers who will want to read your verses in Arabic.”

I was stunned.

Mohammad told me, “We get the BBC in Jordan. You will probably be the most popular author in the Azraq refugee camp.”

But . . . they were just notes that I wrote when I was bored in a law class.

“Good work, Anna,” said Erling quietly. “Good work.”

“Um,” I said, “Erling, this is Aili Biriita. She’s the captain of our team.”

Then I thought that I should add, “Aili, this is Erling.”

The two shook hands.

“Aili,” said Erling, “I wonder if you have a spare white cap?”

“Why, of course!” She looked around until she spotted Liudmila. “Liudmila, our tireless knitter. Do you have a white cap for this gorgeous man which Anna has brought to meet us today?”

Liudmila sorted through a bag beneath her table, picked out a white cap which would fit a grown man with curly dark hair in need of a haircut, walked over to the gentleman in question and—clearly delighted that he would be wearing one of her caps—handed to him this symbol of membership on the White Caps team.

Erling took the white cap into his hands. “Thank you . . . I didn’t catch your name.”

“Liudmila. From Arkhangelsk, Russia.”

“Thank you, Liudmila.” He put on his white cap.

Liudmila, clearly flirting with him, straightened it on his head. “*Otlichno*. Perfect.”

“And how do I say ‘Thank you’ in Russian?”

“*Spasibo*. SpahSEEbah.”

He smiled. “SpahSEEbah!”

“*Dobro pozhalovat*. You are welcome.”

Erling looked at me. “I’m honored.”

It felt so nice to be able to say to him, “Wonderful. Now you’re part of the team.”

“Erling,” said Aili, “you’re affiliated with Doctors Without Borders.”

“Oh, just a junior member,” he said. “I’m only a medical student, but I signed up so that I get their newsletter. I haven’t actually done anything yet.”

“They are doing excellent work with the Rohingya refugees from Myanmar, in the huge refugee camps in Bangladesh. Erling, I wonder if you could gather some information for us. Here’s my card,” she handed him her White Caps business card, “with my email. Important websites, newsletters, articles, photographs, anything that you feel that would be important. Send them to me and I will distribute them to the right people here. Are there schools in the camps in Bangladesh, or are they just struggling to make it through the next monsoon season?”

He nodded. “Sure, Aili. I’m glad to help.”

Then she turned to the room, “All right, all you gawking ladies, back to work!”

Erling walked with me to the train station, the both of us wearing our white caps. People glanced at us. They probably thought it was our religion.

“Anna, maybe you’d like to practice reading your ‘Gospel of Peace’. I’d be glad to listen.”

“Aili says that I’m not just reading. I’ll be *speaking* to an audience. I’ve never before been a speaker.”

“Well, then I’d like to listen to you *speak*. We’ll find a big room and I’ll sit in the back and you reach me with your voice.”

“It’s only ten verses.”

“Right, ten verses which Aili feels are important. You’ll have a microphone. Maybe we should practice with a microphone. I’ll see if we can use an empty lecture hall at the medical school one evening.”

I knew already that the man who had reserved perfect seats at the Tchaikovsky concert would manage to find an empty lecture hall with a microphone.

“Thank you, Erling.”

“You’re welcome.” Then he laughed. “How did she say that in Russian?”

“Liudmila? I can’t remember. I listen to so many languages when I’m working with the White Caps that I can barely remember my own.”

“Well.” We heard a rumble and glanced down the tracks. “Here comes your train.”

Yes, here came my train.

Would he? Would he?

Yes, as the train slowed to a stop, he put his hand on my shoulder and kissed me lightly, briefly . . . our first kiss.

Then he told me, “I’ll phone you tonight.”

“Yes.”

Yes. Yes. Yes.

I got onto the train. The doors closed. I waved to him through the window.

My heart was thumping like a Tchaikovsky tympani.

Chapter Forty-Six

And so it came to pass, that on Saturday, March 6, 2021, well-organized women gathered at vibrant rallies in cities and towns and villages around the world. Far more women and girls, and their male supporters, gathered on this International Women's Day than had gathered a year ago. Because a year ago, the theme had been the Arctic Sanctuary and Clean Energy. This year, the theme was Peace.

There were passionate rallies in the refugee camps around the world. There were courageous rallies in prisons where political prisoners took turns speaking. There was a small rally, with six participants, in the International Space Station; they sent down a message of unanimous support.

The speakers addressing the crowds announced that for a second time, the peoples around the world would vote in a global referendum, to be held on Saturday, September 18. Following a campaign of education and discussion through the spring and summer, people would vote on four statements, with which they would either "Agree" or "Disagree".

Minimum voting age was fourteen years old. The young people who would inherit the great challenges of the 21st century should certainly be able to vote on whether or not they would live in a world at Peace.

The four statements were shown on giant screens at the rallies, and on television screens and laptop screens and telephone screens around the world:

1. No weapon, or component of a weapon, shall be sold or smuggled across the border of the country where it was manufactured. Thus the international weapons trade shall be banned, forever.

Agree _____, or Disagree _____.

2. Nuclear weapons shall be reduced in number until, within this decade (by 2031), they are eliminated. Strict verification shall monitor the eradication of nuclear weapons, and shall prevent the manufacture of any new nuclear weapons or their components.

Agree _____, or Disagree _____.

3. I will fight no wars beyond the borders of my own country.

Agree _____, or Disagree _____.

4. I support the termination of all wars, forever. I support as well a world in which every person has the right to live in Peace, forever.

Agree _____, or Disagree _____.

On Referendum Day in September, 2021, the peoples of the world would once again vote on an issue urgently important to all of them: how to stop the wars which had plagued mankind since before recorded history. How to stop the *profits* which were earned from these weapons and wars. And how to design and build (with the help of the sun, with the help of the wind) a just and permanent Peace, for every person on planet Earth.

Everyone knew that the referendum would not be legally binding. Wars were not going to immediately stop in September.

But if three billion people, maybe four, maybe even five, declared to their governments that the time had come to end this ancient barbarity, the governments would either listen, or find themselves replaced at the next election.

Once the peoples of the world held the possibility of Peace firmly in their minds, there would be no stopping them.

The speakers at International Women's Day in March explained to the attentive crowds that on Earth Day—April 22, a little over six weeks away—the peoples of the world would once again gather at giant rallies. They would deliver their signed petitions—with perhaps three billion, four billion, maybe even five billion signatures—to their governments. And they would demand that their governments authorize this referendum in September, so that it could be held in each country with the same high standards as a national election.

Any government which refused to authorize the referendum would be confronted with a series of rolling strikes, targeted boycotts, and other *peaceful* acts of civil disobedience, starting on April 23, until authorization had been publicly granted.

Once again, the women of the world would work with the young people of the world to conduct a campaign of education and discussion through the spring and summer, and to administer the referendum in September. They would thereby continue the precedent established a year ago, of avoiding all political parties, and

avoiding all campaign contributions. They would thus enable the people, finally, to speak their minds in September.

Yes, we were going to write a new chapter in the book of human endeavor. We were going to be pioneers, not by conquering somebody else's land, but by releasing, and nurturing, the talents of the peoples around the world . . . simply by enabling them to live in Peace.

With our eyes not on old hatred from the past, nor upon the profits to be made by a select few, but upon the unprecedented possibility of a thousand tomorrows, the women of the world announced that their time—that *our* time, all of us—had come.

* * * * *

On International Women's Day in Norway, an enormous crowd gathered once more in Frogner Park in Oslo, where we mingled with the 212 granite and bronze sculptures by Gustav Vigeland. These figures, roughly life-size, portrayed people, unclothed, in every stage of life, from infants to the elderly. At the top of a hill, 121 granite figures were wrapped around a tall monolith, as if people, not stone, rose toward the sky. This was the people's park, and we were the people.

A year ago, I had stood with my mother near the front of the immense crowd, so that we could be close to our Aili when she spoke. This year, however, I stood *with* Aili in the group of speakers on the elevated base of the monolith, looking out at the crowd that nearly filled the park. The mood was both festive and defiant. People were out in the early spring sunshine, but still wearing their winter jackets on this cold, clear day. Most of the people were women of all ages, for today was their day, although perhaps a quarter of the people were men and boys, always welcome. Some people carried placards, such as "Tell the Boys to Stop their Wars", "Let the Refugees Go Home", "No More Nukes", and "I Had the Right to Peace on the Day I Was Born".

Right up front in the crowd, where Aili and I could see them and where they could clearly see us, stood my mother with Marius and his great friend Sigurd, as well as Erling and his mother and father from Halden. I had not yet met Erling's parents and was honored that they had come today.

Aili wore her traditional blue and red Sami *gákti*, a white fur cap with red trim, a red wool scarf over her shoulders, and her Sami boots with their turned-up toes. We noticed that the cameramen from various European television companies, working in

the open space between the speakers and the crowd, would zoom in on her with their telephoto lenses. She was by far more colorful than most of the Norwegian speakers, who wore their three favorite colors: gray, dark gray, and black. Equally important, she was the Sami woman from the Arctic tundra who had sent her film out to the world and thus had helped to launch this global movement. Recently, the White Caps had received an email from a mountain village in Pakistan . . . with a picture of a young girl wearing a pink T-shirt: on the T-shirt was a picture of Aili in her blue and red dress!

And what did Anna wear for her first appearance on the world stage? I had asked Erling, and Aili, and my mother what they thought I should wear. Definitely not something ordinary. But something that made sense, that carried a clear message.

It was my mother who suggested that I wear her *bunad*, the traditional Norwegian dress with the colors and style of the region where the person came from. My mother was born in northern Norway, above the Arctic Circle in the coastal region of Steigen. Her father was from a small town near the tip of a peninsula reaching out into the sea, a town called Leines. Her mother was from a nearby village, Brennvika, at the edge of a long curving beach with tall jagged mountains rising up behind it. Waterfalls poured down those mountains like white ribbons (as I remembered from my trips when a young girl to visit my grandparents).

My mother went into her bedroom, reached into the very back of her closet and took out a long blue dress that I had rarely seen her wear. (There had been some difficulty with her parents, and the trips to visit them had stopped.) She held up the old wooden hanger on which the *bunad* had hung for years, so that I could look at the dress carefully now. The top of the dress was a bib that reached over the shoulders of a white, long-sleeved blouse. The front of the bib was embroidered with flowers; someone had spent hours, days, perhaps weeks stitching those flowers. The bib was also decorated with a row of silver buttons, like the buttons that fastened a vest.

The dress had a long blue skirt, embroidered with flowers along the hem. Over the front of the skirt was a blue apron with a yellow crisscross pattern. Here was a dress based on what rustic folks wore centuries ago: a bib with buttons, a long modest skirt, and an apron in the kitchen. But the *bunad* was decorated exquisitely for some special occasion, such as Confirmation, or a wedding, or the Seventeenth of May.

I touched the embroidered flowers on the bib. “Mom, it’s gorgeous.”

She laid the dress on her bed, then pulled out the bottom drawer of her dresser and found a blue cap, and a blue-and-yellow crisscross woolen shawl (I marveled at the similarity between Aili's *gákti* and my mother's *bunad*).

She took an old cardboard package out of the drawer . . . which contained a circular silver brooch, in need of polishing.

"This brooch cost my parents a fortune," she told me.

And then she found in the drawer a flat, blue woolen pouch, also embroidered with flowers, to be worn over the apron.

She laid all the accessories on the bed beside the *bunad*.

"I used to have some nice boots as well, but I outgrew them, and I think my mother gave them to someone else."

She so rarely spoke about her mother. Even through the divorce from Henrik, I never heard a word. Nor about her father.

But now was surely not the time to ask about some old family trouble. Now was the time to see if the *bunad* fit me, so that I could wear it when I stood for the first time on the world stage and spoke—yes, I would *speak*—to my audience about Peace.

My mother and I spent all Saturday afternoon giving new life to that old dress. It fit me well, first the blouse with its elegant collar, and then the bib and long skirt. The sleeves were long enough. The shoulders were not too tight. The waist was not too loose, not too snug. No problem with the apron.

I asked my mother, "Who embroidered the flowers on the *bunad*?"

"My mother's mother. She worked all winter so the dress would be ready for my Confirmation. I was sixteen."

"What were you like when you were sixteen?"

"I was supposed to be a nice quiet girl who might become a teacher in one of the local schools. Instead, very secretly, I was plotting my escape to Oslo."

"Your escape? What was so intriguing about Oslo?"

"Anna, let's concentrate on you right now. My poor shabby story can wait."

All right. At least she had let me peek in through the door. On some future Saturday evening, I'd open a bottle of her beloved *Beaujolais villages* and coax her to tell her story. But I knew already that it was *not* a "poor shabby story". There was nothing shabby about my mother.

She fastened the brooch to my blouse. Wrapped the scarf over my shoulders. Fastened the funny oval blue pouch with its silver clasp to the waist of the *bunad*. (I looked inside for gold coins, but it was empty.)

She adjusted the blue cap over my long blond hair.

Then she told me to stand in front of her full-length mirror.

I was stunned. I stared at a beautiful young woman, who smiled at me with enormous confidence. It was as if I had just stepped into myself, without fully knowing before who that self was. I was Norwegian, with deep roots way up north in Steigen.

My mother exclaimed, “Anna, my beautiful daughter. You make me so proud.”

“It’s your *bunad*, Mom. And your genes. I’ve hardly added anything.”

I turned around, as all women do when they stand in front of a mirror, peering at myself over my shoulder. I thought—a wave of happiness washed over me—that this was the dress which I would wear at my wedding.

And would Erling wear a man’s traditional suit from Halden?

Well now, let’s just focus on your speech at International Women’s Day. Time for the wedding . . . when and if the time comes.

Yes, I was twenty-one years old now, I was completing my very successful second year in law school, and it was time that I stated clearly who I was. And *part* of who I was . . . was that I was Norwegian, with roots in Steigen, a region on the coast north of the Arctic Circle.

Aili and her people had come from the Arctic tundra. My mother and her people had come from the Arctic coast, the Arctic sea.

Not much time for growing potatoes up there. But I could remember, from a trip when I was about ten, being with my mother and some cousins my age in a huge meadow between the long curving sandy beach of Brennvikkasanden, and the row of giant, jagged mountains that leaped up into the sky behind the meadow. The children were allowed to stay up until midnight that night, because it was July, and the magical summer sun shone red-orange to the north over distant mountains up the coast. The sun lit the wildflowers in the meadow with its golden light. The birds were singing, especially one, the *Dobbeltbekkasin*, a snipe with a long beak and a haunting call.

Yes, that’s where the embroidered flowers came from, a summer meadow that smelled of wildflowers, and smelled of the sea.

Those tall jagged mountains that jutted up into the pale blue midnight sky: every mountain was different, every mountain had its own personality. Above the ragged black peaks, their steep slopes lit golden-red by the sun, we could see tiny specks circling: the sea eagles riding on the wind off the sea. The wind blew up the sides of the mountains and lifted the eagle's wings as those huge birds sailed in the golden-blue heavens.

Waterfalls tumbled almost straight down those mountains like long thin white ribbons that disappeared into the green meadows. We would face the waterfalls and cup our hands behind our ears so we could listen to them roar. The mist that rose from where the ribbons crashed against the rocks was lit golden-red by the midnight sun, as if the sun had a magic wand that could tinge everything it touched with radiant red.

The waterfalls emerged as streams meandering through the meadows, streams with water so cold that we loved to kneel on the bank, take a deep breath, then lower our faces into the cold, cold water and take a gulping drink.

The streams emerged from the meadows onto the broad beach, where they became braids rippling across the sand to the sea.

Ooooh, the sea, with its big ocean-rolling waves that reached up so high as they approached the shore, catching the light of the sun on their crests. When they crashed upon the sand and sent their white foam racing up the slope, that foam too was tinged red by the magical sun.

Yes, that's who I was, a girl from the north.

I didn't say anything just then. My mother was brushing back my blond hair, and then adjusting my blue cap. But I thought that the time had come, sometime soon, for us to take a trip home.

* * * * *

And so I stood on International Women's Day beside Aili, *bunad* beside *gákti*, the two of us waiting for our turn to speak. I, Anna Jakobsen, would speak as a Norwegian woman, as all the world would be able to see.

Aili touched my arm and pointed at a TV cameraman who gestured to us: could we stand a bit closer together?

I stepped toward Aili, so that we stood shoulder to shoulder. I tried as best I could to emulate her confident smile.

The cameraman got his five-second shot (perhaps he would use it later if he covered us as speakers), then he lowered his big camera and showed us his red jacket with writing in two languages: Arabic, and English. I read the English, AL JAZEERA.

“Al Jazeera!” I whispered to Aili with astonishment. I knew from some of the White Caps that this was the Arabic television station based in Qatar.

“Good,” she said. “Your ‘Gospel of Peace’ will go out to the entire Arabic world. Adnan did a beautiful translation for the website. You’ll probably get a million hits.”

The speaker before me on the agenda now stood at the microphone. In a couple of minutes, it would be my turn.

I looked out at my mother in the front of the immense crowd. Marius and Sigurd stood to her right. Erling’s mother stood to her left.

Yes, the two mothers stood together. Here, at a moment in history, they were getting to know each other.

Then Erling’s father—a tall handsome man who looked the way Erling would look in about thirty years—gave me a wave and a smile of encouragement.

Beside him stood Erling, my speaking coach, who had taught me how to speak into a microphone without holding back. “Don’t be afraid, Anna,” he had told me. “Send them home with your voice ringing in their ears.”

He was looking at me now. He gave me his handsome smile and a thumbs-up. I gave him a nod. And began to take deep breaths so that I would be ready.

Chapter Forty-Seven

I heard my name as the announcer introduced me to the crowd that had become increasingly noisy during the speaker before me. She had gone on and on, repeating the same old clichés. That was one thing Aili never allowed the White Caps to do: in our website, in all of our notices and articles, No Clichés.

I walked to the center of the stage, nodded my thanks to the announcer, then I took the microphone from its stand and gripped it in my hand, five centimeters from my lips.

I looked out at the crowd, glanced at the television lenses pointed at me, and then, with a booming voice, I spoke to my audience, **“And God said, ‘Let there be *Peace*.’”**

Erling in his red jacket gave me a thumbs-up.

The audience became immediately quieter.

I told them again, **“And God said, ‘Let there be *Peace*.’”**

In front of me stood at least two hundred thousand people, almost perfectly silent.

I told them,

**“And lo, God looked down at a world where *Peace* dwelt in every land,
And He said, ‘It is good.’”**

I swept my arm toward the television cameras of the BBC, of Euro News, of Tele-France, of Al Jazeera.

**“Blessed are the peacemakers,
For they shall prepare the world
For the coming of your children.”**

Now I swept my arm toward the crowd that filled the park. I nearly shouted at them,

“Go forth into the world and sow the seeds of *Peace*.”

I said more quietly, but with deep conviction,

“And when thou dost come, with white hair, unto thy final years,

Look back and savor in thy heart

The houses of Peace which thou hast built upon the land.”

I looked over my shoulder at the giant screen beside the stage. Yes, there in the split image was me in my blue *bunad* to the left, and the text in big bold letters to the right. Crystal clear.

To the young people of the world, I said (borrowing from Aili),

“Let us beat the blades of our swords

Into the blades of wind turbines.”

To the Boys with their trigger-fingers, I said,

“Harness the power of the sun

To light the world.

Do not harness the power of the sun

To store in your bombs.”

To the valiant women of the world, I said,

“Look back at the receding centuries of war

With loathing in your heart.

Never return, *never*, to that swamp of evil.”

With the stern voice of Moses,

“The eleventh commandment: ‘Thou shalt not plunder.’

The twelfth commandment: ‘Thou shalt honor thy neighbor’s *Peace*.’”

And finally, to the peoples of every religion on planet Earth,

“The only sin greater than the sin of war

Is the sin of destroying God’s creation.”

I bowed to my audience, put the microphone back in its stand, then I walked across the stage toward Aili, who was beaming at me with pride.

I stood beside her. She gripped my hand.

As I turned toward the roaring crowd, I looked down at Erling, holding up his fists and shaking them in triumph. At my mother, patting her hand again and again over her heart. At Marius, who cupped his hands and called to me, “Bravo!”

Chapter Forty-Eight

When the announcer began to introduce Aili Biriita Gaup to the audience, Aili turned to me and said, “Five billion purple thumbs.”

Then she walked to the microphone, took it from its stand, reached her blue and red arm out to the crowd and greeted them with a vibrant voice, “**Bures!** Hello!”

Several hundred Sami scattered throughout the crowd called back, “**Bures! Bures!**”

“I am Aili Biriita Gaup, a Sami woman born and raised on the Arctic tundra. When I was a little baby, I slept in a *komsa*, a cradle made of reindeer hide. My mother would sing to me, as mothers all around the world sing to their children. One day, if I am fortunate, my own child will sleep in a *komsa*, a *komsa* which I have made with my own hands. I will sing my mother’s songs, and my grandmother’s songs, so that my child can sleep in a world of warmth and safety and peace.”

She stared into the lens of the Al Jazeera camera as she said with a stern voice, “*But . . .* many children today do not live in a world of warmth and safety and peace. They live in a war zone, where barrel bombs come crashing down from the sky. They live in a basement bunker, suddenly filled with poison gas. They live in a refugee camp, in a dusty tent among ten thousand dusty tents, where schools have no books, and doctors come and go every two months. The children do not hear their mother’s songs, because their mothers are too exhausted to sing. The children do not hear their grandmother’s songs, because their grandmother was too old to flee from the war.”

Aili paused, so that those who listened . . . had time to think.

“Today is International Women’s Day, and so I address primarily the women of the world. We have come, I believe, to a point where we must make a major decision. Do we continue to accept that wars are inevitable, that wars spring from some dark region of the human psyche and thus can never be eliminated? Or do we believe enough in ourselves—do we believe enough in creatures capable of love, capable of learning, capable of bold creativity—to decide that we need not be chained to this evil monster forever?”

She looked from camera to camera, to camera, to camera.

“I would like to ask the question today, What is the cost of war? Because I believe that once we understand the full cost, those of us who are not earning *profits* from these wars . . . will be able to make a major decision.”

Now Aili did something that no other speaker had done. She reached into our wallets: the wallets which we kept in our pockets, and the wallets which we kept in our hearts. She showed us that we had been robbed in the past, we were being robbed today, and we would continue to be robbed in the future . . . unless we chopped off the hand of the thief.

“In 1918, at the end of World War One, Europe was so devastated, so exhausted, bled of money and bled of men, that the survivors could barely crawl out of the rubble. European governments were so impoverished, and so unable, despite the warnings of John Maynard Keynes, to design a new economic system, that the seat of financial power moved from the banks of London to the banks of New York.

“The pattern was repeated during World War Two, on a much larger scale. Civilization had collapsed twice during the brief span, from 1914 to 1945, of thirty-one years. Russia had fought off a savage invasion. Western Europe had been crushed beneath the military boot. Genocide swept like a plague around the world. And a new type of weapon, born as the child of war, burned hundreds of thousands of people to death in an instant with the nuclear heat of a star.

“However, the banks of New York were fattened by the war, and even greater power accrued to Washington. An American magazine publisher, Henry Luce, declared that a new era had begun: ‘The American Century’.

“But Stalin, deep in the mysterious chambers of the Moscow Kremlin, was determined that the Soviet Union would never again, because of weakness, become the victim of military aggression. He launched the development of Soviet nuclear weapons, and thus barely four years after the end of the worst war in human history, on the 29th of August, 1949, the Soviet Union detonated its first nuclear device. Now two ‘superpowers’ had harnessed the heat of a star.

“The race was on. Massive amounts of money were spent to build more and more weapons. A growing number of ‘proxy wars’ were fought around the world, decade after decade, as the two Big Boys showed their strength . . . and tested their ‘conventional’ weapons. War became an international industry, especially when it became intimately entwined with the oil industry. These two evil twins dominated the world, wreaking their merciless devastation which continues to this day.

“After forty-four years, from 1945 to 1989—the year when the Berlin Wall was torn down—the Cold War came to an end. The Cold War came to an end not on a battlefield for military reasons, but because the Soviet Union had collapsed for economic reasons. The end came peacefully because of a deeply intelligent man

named Mikhail Gorbachev, who had the courage in 1985, when he became President of the Soviet Union, to look for entirely new solutions to the problems which plagued his nation.”

Aili paused, then she repeated, “who had the courage to look for *entirely new solutions* to the problems which plagued his nation.”

Someone called out in Russian from the crowd, “SpahSEEBah, Aili! BalSHOYah SpahSEEBah!” Thank you very much.

Aili spotted the person, waving deep in the crowd, and nodded.

Then she continued, “But Gorbachev faced enormous opposition, primarily from men who did *not* want new, bold, innovative solutions. Men in the Soviet Union, and men in Washington. And so, after a few years of faltering hope, and a genuine desire among the Russian people for friendship with the West, Gorbachev was pushed out of power and a great opportunity was lost.

“Russia sank into the devastating depression of the 1990s . . . while America gloated that it had won the Cold War.

“Keep in mind that the Russian people struggled through the disastrous decade of the 1990s *peacefully*, without riots, without police in the streets, without martial law. They planted their potatoes in *dacha* gardens, they helped each other—though nearly every family had lost its savings when bank after bank collapsed—and thus they survived. The city streets of America today are far more dangerous for African-Americans than the streets of Saint Petersburg were for the Russian people in 1995.”

She paused, then she asked, “How do I know? I grew up in the north of Norway, close to the Russian border. The Russian Sami and the Norwegian Sami share the news from Saint Petersburg, from Moscow, from Oslo, from Washington, from New York. Yes, the people in my home town of Guavdageaidnu knew what was going on. Had Russia exploded into civil war, the refugees would have poured across the Norwegian border.”

Now she paused for a long moment. I could hear a wailing siren in the distance, somewhere in the neighborhoods beyond the park.

“We can ask, if we take the time to ask the Big Questions, What was the cost of the wars of the 20th century? And having spent all that money on weapons and war, what progress did we make?

“And . . . if we look at the first twenty years of the 21st century, we can ask, Are we doing any better?

“If you are a family still struggling to survive in Syria, you can witness in your own neighborhood the total destruction that turned Dresden, Germany into heaps of rubble during World War Two.

“If you have been the victim in any of a dozen Syrian towns and neighborhoods of a poison gas attack—yes, will Russia’s help and compliance—you have experienced the horrors of trench warfare during World War One.

“The old shit goes on and on. We have been digging our own graves for so long that we can’t imagine doing anything else.

“If you want the most accurate and comprehensive information on global military spending, then you visit the good people at the Stockholm International Peace Research Institute, SIPRI. They will tell you that in 2017, total world military expenditure was 1.739 *trillion* U.S. dollars, an increase of 1.1% over the amount in 2016. This amount represents 2.2% of the global gross domestic product; out of every hundred dollars that humanity spends, two dollars and twenty cents goes to pay for military expenses.

“Divide 1.739 trillion dollars by the population of the world in 2017, and you thus calculate that each person living on planet Earth was billed \$230, in just that one year, to pay for our unrelenting barbarity.

“China, India and Saudi Arabia are all steadily increasing their military budgets. However, the United States of America is by far the biggest spender. The United States spent 610 billion dollars in 2017, or 35% of the global amount. The U.S. spent more on its military than the next *seven* highest-spending countries combined, primarily for the modernization of conventional and—here it comes—nuclear weapons. We are heading back to the Cold War, as if that’s our only option.

“Russia spent 66.3 billion dollars in 2017, a *decrease* of 20% from the 2016 amount, due to economic problems within the country. On the other hand, the 29 countries which are members of NATO, including Norway, spent 900 billion dollars in 2017, or 52% of the global total.”

Aili paused. She always told the White Caps, “Not too many numbers. Just enough for people to see the Big Picture.”

Then she continued, “Obvious Question Number One: Are we any safer because we spend all of this money?

“Obvious Question Number Two: Will this pattern, this way of thinking, continue forever?

“Obvious Question Number Three: What are the alternatives?”

She paused.

“We can look at the long barbaric century from 1914 to 2021, and we will find very few bold new solutions. This is a bad movie, and we have seen it over and over, too many times.”

Now she hit us with her double punch.

“Yes, we might survive another world war, if we don’t use too many nukes. We might survive the endless smaller wars. And we might survive, if we are extremely lucky, a century or two of climate devastation.

“But we will not survive the two together. Global warming and war . . . will be our epitaph.”

I could hear the anger creeping into her voice.

“What is the cost of war? How many people killed? How many lives ruined? How much money wasted to prolong this mad catastrophe?

“But there are other costs. The cost of wasted talent.

“How many doctors, and future doctors, were fed into the gas chambers of Auschwitz?

“How many teachers, and future teachers, died of cold and starvation during the Siege of Leningrad?

“How many young men who could have become brilliant chemists, died when they were sprayed with Agent Orange in the jungles of Viet Nam?

“How many young men and women, with great dreams for their country, were killed by assassins in Nicaragua?

“How many young people who might have become clean energy engineers, have been killed by the endless wars in Afghanistan?

“How many young people might have become green architects—designing entirely new solar-powered cities in the desert—if their present cities had not been demolished by the endless wars in Iraq?

“How many concert pianists, how many composers of symphonies, how many great mathematicians, how many nutritionists, how many national poets . . . lie buried in the rubble of Aleppo?

“How many astronomers, how many nurses, how many human rights attorneys, how many child psychologists . . . have been killed in Yemen, their deaths paid for by part of that 1.739 trillion dollars?

“How many Yazidi women are still held in brutal captivity, in a world where the news media barely notice?”

She paused, then she said, “I could go on.”

She slowly scanned the crowd, looking at *them*, looking at *them*.

“There are other costs. Yes, with the loss of so much talent, there are other costs.

“How many diseases were never eradicated?

“Why did we lose so much time before we even *began* to tackle the challenges of global warming?

“Why didn’t we begin to develop clean energy from the sun during the 1950s? Instead of bombs during the 1950s.

“As African colonies gained their freedom, as Asian colonies gained their freedom, from the old colonial masters, why didn’t we help them with schools and universities, instead of turning them into proxy battlefields?

“Why are we today just discovering how polluted the oceans are, with *decades* of plastic?

“Why didn’t we create sanctuaries in the Amazon rainforest during the years of protest in the 1960s, instead of waiting so long that even today, half a century later, we are still watching the forests burn?

“Why didn’t we grant indigenous people their rights in the 1960s, instead of hunting them with assassins today?

“Why are millions of girls in countries around the world still refused a seat in a classroom?

“Why has progress been so unrelentingly hobbled by the chains of the past?

“In part, because we are too busy fighting our wars.”

Now Aili did something that she had first done on the stage at the University of Oslo. She *breathed* into her microphone, strong, steady breaths—blowing a faint wind from her lips over the top of the microphone—so that everyone in the crowd, and everyone listening to the BBC and Euro News and Tele-France and Al Jazeera, could hear the living breath of the person who was speaking to them.

Then she said, “There is another cost of war.

“We have lost our vision. We have lost our vision of what we *could* be, what we *could* do, if . . . we stopped killing each other.

“We have lost our belief in ourselves, in our talents, our intelligence, our innate sense of right and wrong.

“Instead of marveling at Michelangelo’s great marble sculpture, the ‘David’, the Renaissance figure who represented the *best* that a man could be, we now use conscripted soldiers for target practice.

“Instead of marveling at a woman’s ability to bring new life into the world, we deprive millions of women of a decent hospital.

“Without a vision for the future, without a belief in what we *could* become, we condemn ourselves to live with our hands and feet bound by the shackles of the past.”

Now the anger which had tinged her voice rose up in full force.

“There is one final cost of war.

“With every war that we have fought, with every prisoner whom we have tortured, with every refugee child whom we have driven from her home, we have *spat* . . . at the face of the Creator.

“Do you think that whatever spirit it was . . . that first nurtured life upon this planet, and then *continued* to nurture that miracle for billions of years, until living creatures today are able to write symphonies, and to save a life with a transplanted heart, and to power a town with wind turbines . . . Do you think this Creator is pleased when we use our intelligence to develop the next generation of bombs?

“Do you think this Creator is pleased when we fire missiles into the maternity ward of a hospital in Syria, in Afghanistan, in Yemen, in Palestine?

“Do you think this Creator is pleased when we plunder the creatures of the sea almost to extinction?

“What is the cost of spitting into the face of the Creator?”

She paused.

“We will see.

“We will see.”

Now she stepped back, still holding the microphone, to give, as always, her audience time to think.

Looking not at the crowd, but slightly upwards beyond the crowd, beyond the buildings, as if what she really wanted to see were her mountains back home, she perhaps heard in her mind the haunting sound of a Sami *joik*, the music that gave her people their strength.

Now she stepped forward, raised the microphone and said, “Peoples of the world, we vote in September. Half a year from now. We have half a year to think about how we, together, can change the course of human history. We need bold, innovative thinking. We need you to dream *Big Dreams*. We need you to believe in yourselves. We need you to believe that our Creator put us here with a purpose. We need you to stand up to the evils that now control our world, and to put them behind

us as we march forward with long, bold strides. We are well on our way. Let us not falter. Let us be the heroes in our own epic tale.”

She held up her thumb. “In September, **five billion purple thumbs.**”

As she set the microphone back on its stand, then walked across the stage toward me, two hundred thousand people began to roar, so that even the applause was drowned out by the thunder of their voices. I remembered for a moment the roar from the audience at the end of the Tchaikovsky Violin Concerto, when people rose to their feet and filled the great hall with their shouts of admiration for the orchestra and for the extraordinary violinist. But the roar today from that vast crowd in the park was a voice far greater than any voice I had ever heard.

Aili gripped my extended hand and stared at me for a long moment as if from a mountaintop. Then she turned toward the crowd and held both her hands over her heart as she bowed.

Part X

Referendum Day, 2021

Chapter Forty-Nine

We were determined, already in March, that Referendum Day in September of 2021 would be an historic day. If a billion young people, working through the spring and summer, could motivate three billion people to vote on the blessings of Peace, that alone would be historic.

First, the young people must gather enough signatures in every country to enable them to *demand* a referendum, never mind what their governments thought about war and peace. That first step must be completed by Earth Day in April.

Second, the young people must spend their summer knocking on doors and talking with people in major cities, small towns and remote villages about the importance of voting for Peace. The need to control the weapons, to control the wars, was far too important, and too urgent, to leave it in the hands of the politicians. The time had come for the people themselves, whose ancestors had fought and died in those wars, to take responsibility for their own future.

Third, the young people—with guidance and support from women who had battled for their rights for years—would set up the voting booths in their schools, then closely supervise the voting process on Referendum Day.

There would be no lost ballots, no voters turned away at the door. The young people themselves stated that this referendum was going to be conducted with “one *thousand* percent transparency.”

Voters would use electronic ballots (as had been done the year before with great success).

Though these great young people would be assisted by older people, women and men both, the responsibility for making the referendum a success was *their* responsibility.

Thus the success would be *their* success.

The referendum documenting the determination of the peoples of the world to build a just and permanent Peace . . . would be *their* mandate to work for Peace for the rest of their lives.

What more could a generation ask for?

* * * * *

By April 18, four days before Earth Day, the extraordinary young people had gathered over 3.8 billion signatures, twenty-five on each sheet of official signature forms, which they delivered to their governments in hundreds of thousands of boxes. Without exception, every government in the world recognized the right of the people to hold their referendum.

Aili did not speak on Earth Day in April. Neither did I. Five of our White Caps spoke about the wars in their homelands, using their own pictures of devastation and death on the giant screens.

One person who did speak on Earth Day was a statesman whom the world would never forget. At one o'clock in the afternoon in eastern America, President Bernie Sanders, elected in November of 2020 and serving as President since January of 2021, emerged from the White House to the sunny lawn of the Rose Garden, where he stood at a microphone to address the world.

This white-haired gentleman, who had brought honesty and integrity, and deep intelligence, to the office of the President, now gripped the sides of the podium and smiled his beatific smile as he scanned the audience: young people, each one an American, from a multitude of racial and ethnic and religious backgrounds, some of them from his native Brooklyn, some of them naturalized citizens originally from the war zones of the world, some of them—including Leonard Peltier, whom the President had pardoned on his first day in office—from the Sioux Nation of North and South Dakota.

On this Earth Day, fifty-one years after the original Earth Day in 1970, President Sanders looked into the television cameras of the world, and then he said,

“I would like to thank the young people of America—this generation which embodies the fierce determination of the American spirit—for delivering over two hundred and twenty million signatures to their state capitals, to the District of Columbia, and to the government offices of the American territories around the world. I hear that Puerto Rico, where the lights are finally on, collected more signatures per capita than any other region under the American flag.”

A cheer went up from the Puerto Ricans in the audience.

“Over two hundred and twenty million Americans have signed their names . . . as they *demand* the right to vote in September on the great issues of war and peace. Never before in the history of America, never before in the history of humanity, have the people demanded such a referendum. In July of 1969, one man took an historic

step on the moon. Today, fifty-two years later, over 3.8 *billion* people have taken an historic step on planet Earth.”

President Sanders paused, as if savoring the moment.

“And so I say ‘Congratulations!’ to the young people of America, and to the young people of the world. You have brought us a great distance. You have shared with us your belief in humanity . . . and your determination that together, we can continue this steady march of progress.”

Now he applauded his audience, who joined him with their prolonged and mutual applause.

President Sanders continued, “I only wish . . . that Thomas Jefferson could be with us here today. That Abigail Adams could be with us here today. That President Lincoln could be with us here today. That Martin . . . and Bobby . . . and John could be with us here today.

“Every nation has its freedom fighters. Some of them died while suffering the agonies of torture in prison. Some of them died because of an assassin’s bullet. A few—very few—lived long enough to witness the blossoming and flourishing of freedom in their countries. As we work together toward the historic day in September, let us remember those who went ahead of us, when the path was long, when the path was rocky.

“Let us show to the world an unprecedented example of *peaceful* determination, as we together give the greatest gift possible to ourselves, and to—as General George Washington called them—‘the unborn millions’: the gift of Peace.”

President Sanders reached out his hands toward his audience.

“Thank you. Thank you. You give us hope.”

Chapter Fifty

During that summer of 2021, something happened that had never happened before . . . or it *had* happened, but only to a very limited degree. Veterans began to speak about the wars they had fought in, and about returning to their homes where few people could understand what they had experienced at war.

The veterans spoke because, often for the first time, they were *invited* to speak. Yes, their families had always tried to understand, but now the people in their communities—especially the young people—wanted to know the *real* truth about these wars. Not the politicians’ “truth”. Not the flag-waving truth. Young people invited the veterans to speak about day-to-day life in the war zone, about encountering the enemy, about *why* that had fought this war.

The young people had many questions, and the veterans had many different answers.

The more the veterans spoke, the more they *wanted* to speak. In villages and towns and cities around the world, their communities gave them a microphone, in a school auditorium, in a movie theater, sometimes even in a church, a mosque, a synagogue. The audiences grew, because for the first time, they were learning about war not from some “commander in chief” who sat in his office and secretly counted his profits, but from soldiers who had watched their friends die on a battlefield . . . while they tried to kill other soldiers who were watching *their* friends die on a battlefield.

Never before in human history had so many people around the world gathered together to learn about war.

And then the veterans began to ask the refugees if *they* would speak. Some of the refugees had managed to reach a safe country, where they tried to adapt to the culture of their new homeland. Some of the refugees had managed to reach a sanctuary in a refugee camp, where they were safer than back in the war, but where they felt trapped with no jobs, few schools, limited medical care, and endless waiting. And some of the refugees, though they may have left the rubble of their bombed neighborhoods, tried to survive in some other village, until it too was bombed.

Refugees who lived in safe countries were invited to speak in the schools, in community halls, and in churches and mosques and synagogues, where they too, like

the veterans, found the courage to speak about the devastation and death which had come crashing into their lives.

During the summer of 2021, increasing numbers of journalists, some of them professional, some of them young people with questions, traveled to the refugee camps around the world, so that the refugees trapped in those camps could speak. A few journalists managed to reach the war zones, where they found people hiding in basements who had a story to tell.

And then doctors began to speak, some of them from organizations like “Doctors Without Borders” who had served on medical teams in war zones and in refugee camps, and some of them natives of the countries at war. They spoke about conditions in hospitals with infrequent electricity, with limited medical supplies, with limited water, with no water. They spoke about not enough beds, not enough doctors, not enough nurses, not enough time to sleep. They showed pictures on a screen while they spoke, pictures which they had taken with their telephones, of children who had been gassed; of teenagers who had lost a hand, a foot; of colleagues—fellow doctors, fellow nurses—who went home to their families to eat a meal and to sleep, and who never returned to work the next day. Doctors were targets. If the enemy could kill a doctor with an assassin’s bullet, then many of his patients would also die.

Native peoples began to speak, about the hidden wars, the secret wars, which governments and powerful corporations fought against them, in order to steal their land, to drill for oil, to dig the mines, to cut down the forests, to plunder and plunder and plunder. These wars were ecocide combined with genocide, a special kind of war. Native leaders were assassinated by hired mercenaries who moved from country to country looking for work.

Little by little, women began to speak, telling their stories as the victims of war. Yazidi women from northern Iraq spoke—those who had escaped and were able to speak—about their hideous existence as prisoners of the Islamic State. Rohingya women spoke in refugee camps in Bangladesh, about the brutalities they had endured in Myanmar. Vietnamese women spoke—women now in their 70s—about the American invaders during the 1960s and 1970s, soldiers with money who used the young women . . . and then left behind thousands of half-American children in a country that despised them.

For many people who listened to the speakers in a high school auditorium, and for many people who watched the veterans, the refugees, the doctors, the indigenous peoples, and the women on programs televised around the world, the truth expressed by these witnesses of war was unforgettable. And of course, the voices they heard were only a few of the voices . . . among millions of veterans, millions of refugees, thousands of doctors, millions of native peoples, millions of women, some of whom had survived, some of whom had not survived.

Years later, people spoke about “the summer of 2021, when we all got an education.” In September, even before the referendum on the 18th, students demanded that new courses be taught—courses just as important as biology and math and literature and history—about “War and the Victims of War”. About “Building a Just and Permanent Peace”. The students demanded that these courses should be taken by every student as a requirement for graduation.

Yes, and every student would do the research and write an essay on a topic of the student’s own choosing. Thus every student would learn—from interviews, from old newspaper articles, from history books—how to track down the truth about war.

Their generation was going to be different from previous generations. Their generation was going to be *educated* about this plague which had impeded human progress for centuries. They were never going to be able to build their Renaissance while wars were destroying the foundations on which they were trying to build.

The White Caps—always redefining their mission as they helped schools to find other schools, audiences to find speakers, and journalists to find witnesses—set up new websites with new contact lists and new blogs.

Anna worked especially with refugees, enabling Loreen and her eight-year-old daughter Lamar to become prominent speakers.

Erling worked with doctors, building a global network of speakers.

Aili developed her already extensive network of indigenous speakers, linking them with journalists.

Sofia, following her day with premature infants, joined the White Caps three evenings a week to reach out to Yazidi women, connecting them with a growing number of journalists.

Marius and Sigurd, both thirteen and going into eighth grade, insisted on building an online library of sources about war crimes in Syria. Marius had become good friends with Lamar in Paris, and now he wanted “to document the truth, so that people—including my sister, the future human rights lawyer—can demand justice.”

Both Marius and Sigurd wore their white caps with enormous pride.

Meanwhile, young people around the world were knocking on doors and talking with people about the referendum on September 18th.

They were getting the voting booths ready in their schools.

And they were making sure that multitudes of companies, large and small, in countries around the world . . . were manufacturing sufficient quantities of purple dye.

Enough for at least five billion thumbs.

Chapter Fifty-One

As Referendum Day drew closer, people began to feel something very deep, and completely unprecedented. Referendum Day on September 18 was going to be more than an historic day. It was going to be a sacred day. It would be day on which people—ordinary, individual people—would be doing God’s will. Doing Allah’s will. Doing Jehovah’s will. Doing the will of the Creator.

Even people who would describe themselves—vehemently—as not religious, felt that humanity was about to take a momentous step forward. No doubt some fools and some profiteers would continue to fight their wars for some time into the future, but the vast majority of people—it was hoped—would soon declare an end to the ancient sickness of war. People simply would not tolerate it any more.

A small town somewhere—some people said in Switzerland, some said in Brazil—announced that the local church would ring its bells at eight in the morning on Saturday, September 18, to signal the opening of the voting booths in the local school. The church would ring its bells again at eight in the evening, to signal the closing of the voting booths. The church bells would not only announce the beginning and end of twelve hours of voting; they would also give their blessing.

Other churches around the world announced that they too would ring their bells. They too, in this subtle way, would declare the day as sacred.

Muezzins would call from the tops of minarets at eight in the morning and again at eight in the evening, announcing the opening and closing of the voting booths in the local schools.

The word “Peace” would be spoken in many languages, in many greetings, in many prayers, on that sacred day.

* * * * *

Of course, during that summer of intense work, the White Caps continued their tradition of weekly picnics at Sognsvann. We would gather at the pier where the swimming was best, and where the picnic tables were laden with baskets of food from around the world.

Oooh, the joy of diving off the end of the pier into the cold, clean water . . . especially after a week in the busy, crowded city office. Often, Erling and I dove in together, so that a meter deep, where no one could see us, we would grip each other’s

shoulders and savor a cold delicious kiss. Sometimes our laughter bubbled to the surface.

One of my favorite memories from that summer is the memory of my mother's happiness at those picnics. She loved all her new friends from countries around the world. She quickly learned the names of the White Caps at headquarters, strange, impossible names from so many countries. And she just as easily learned (and remembered!) the names of spouses and girlfriends and boyfriends, and even the children at the picnics.

I now understood that she had a huge capacity for friendship—and a great *need* for friendship—which the cool and reserved Norwegians could not respond to.

She brought her now-famous potato salad to the picnics, and exchanged recipes with women who were delighted that she liked their spicy dishes. Yes, my mother fully blossomed that summer—swimming, laughing, singing—as if she were savoring, just once in her life, being a happy girl.

* * * * *

Something else that summer, something we all waited for, something that could happen at any moment: the angry backlash from governments that would not tolerate anyone attempting to shut down their war machine. The sudden attack from corporations that could spend small change on mercenaries, thugs and assassins to protect their enormous financial interests.

The White Caps had no bodyguards, no security door, no metal detectors at our headquarters. Certainly we could have been viewed as radicals, as trouble-makers, as potential terrorists. Aili took a special risk. How much longer was Big Oil going to tolerate this dangerous woman with her propaganda about “sanctuaries”?

But no one pulled a trigger that summer. No one tossed a bomb at a room filled with voting booths. No one greeted a young person knocking on the door with a punch in the face. People debated the four statements, but they rarely shouted or walked away. Instead, they listened to each other, and learned from each other. With more than just politeness, or patience. They listened with respect.

Perhaps they understood that this was their last chance. Perhaps they understood that their grandchildren would judge them. Perhaps they understood, as they listened to the veterans, that really, the time for wars was over.

Perhaps they understood what it meant to be human.

Chapter Fifty-Two

A church bell began to ring at eight in the morning on the island of Kiribati, one of a cluster of islands in the South Pacific Ocean which form the Republic of Kiribati. The church bell of Saint Stanislaus Catholic Church, ringing just west of the International Date Line, signaled that the voting booths in the island's two high schools were open. Referendum Day had begun in the earliest time zone on planet Earth.

Twelve hours later, as cities and towns and villages on planet Earth rolled eastward from the shadow of night toward the glow of dawn on Saturday morning, September 18, 2021, church bells would ring at eight o'clock in Oslo, in Paris, in Warsaw, in Zagreb, in Cairo, in Khartoum, in Harare, and in Johannesburg, signaling to the voters who lived in this time zone that the booths were open.

While the bells of the Cathedral of Notre Dame in Paris were ringing at 08:00 on Saturday morning, the bell of Saint Stanislaus was ringing at 20:00 on Saturday evening, signaling that the voting booths of Kiribati were closed.

Twelve hours later, the bells in Papeete Catholic Cathedral on the island of Tahiti, one of a cluster of islands in the South Pacific Ocean which form French Polynesia, just *east* of the International Date Line, began to ring at eight o'clock on Saturday morning, signaling that the voting booths in Lycée Paul-Gauguin were now open.

Meanwhile, the bells of Paris and Johannesburg were now ringing at 20:00 on Saturday evening, signaling that the voting booths were closed.

Thus for thirty-six hours, in twenty-four time zones, the peoples of planet Earth awoke on the morning of a bright new day, gathered in festive lines at the doors of the local schools, and presented their registration papers to bright, well-dressed young people who checked their names on a list. Then they stepped into a voting booth with a curtain—they stepped into a small, sacred room where they stood alone with their God, with Allah, with Jehovah, with their Creator—and they voted on the four statements which they had thought about for six months, half a year.

They voted on behalf of themselves, of their children, and of their grandchildren.

They voted on behalf of the veterans, who had spoken with their honest voices about “the crimes of war”.

They voted on behalf of the refugees who had lost their homes, their schools, their grandparents, their friends, their mosques, their markets, their jobs, their everything, everything, *everything*.

They voted so that never again would there be veterans, never again would there be refugees.

They remembered what President Bernie Sanders had told them: that the *first* president of a new America, President Washington, had spoken about “the unborn millions” who would one day populate the Earth. Well, voters today were a part of those unborn millions, and so they would remember the unborn millions still to come.

For a minute or two inside the voting booth, they thought about Peace—they heard the word in their mind in over two hundred languages—and then they clicked on the four boxes on the screen.

Yes, God was looking over their shoulder. The Creator witnessed every click.

And then they stepped out of the voting booths in New Zealand and in China and in India, in Russia and Zimbabwe and Peru, in Iceland and in Greenland and in Alaska, in Hawaii and in Tahiti, and they dipped their thumbs into a jar of purple ink. With a grin, they held up their thumbs for all of the world to see.

The final tally, announced on Sunday afternoon, was 5,392,721,644 purple thumbs. Almost 5.4 billion!

Most of these purple thumbs were recorded for history in joyful, jubilant, triumphant selfies. Young couples and elderly couples were photographed showing their two purple thumbs. Families posed for a group portrait with their five, ten, fifteen, twenty, twenty-five purple thumbs. An entire church choir had their portrait taken with forty-eight purple thumbs.

Students in high school, students in college, students at the university . . . they completed to see who could get the most purple thumbs into one picture.

To go back a bit: 08:00 on Saturday morning on the South Pacific island of Kiritimati was 20:00 on Friday evening on the other side of the world, where people in Stockholm were waiting—they were excited, they were hopeful—for tomorrow to come.

And 08:00 on Saturday morning in Vienna—where the air was fragrant with fresh coffee—was 20:00 on Friday evening in Tahiti, where people were waiting—with glasses of *Beaujolais villages*—for tomorrow to come.

20:00 on Friday evening in Tahiti was, on the other side of the International Date Line, 20:00 on Saturday evening on Kiriritimati, where the voting booths were closing, and where the people of the Republic of Kiribati were beginning to celebrate their successful and peaceful Referendum Day.

As the voting had begun on Saturday morning in the South Pacific and had moved westward, so the celebrations on Saturday evening moved westward, most of them lasting well into Sunday morning.

One by one, twenty-four time zones reached 20:00 on Saturday evening, when church bells began to ring not only to signal the closing of the voting booths, and not only to signal—as they kept ringing and ringing—the beginning of the celebrations, but also to bestow their blessing on this historic day, this sacred day, when nearly everyone fourteen years old and older had helped to change the course of human history.

Yes, the peoples of the world had *demande*d—they knew this even before the voting results were announced—that the 21st century would be completely unlike the 20th. The long human journey, stretching back for three million years to the plains of Africa, would now continue in an entirely new direction.

Living in a world at peace, people could now, working together, tackle the great challenges of global warming. No longer would the building of an international clean energy grid have to compete for funding with endless barbaric wars. No longer would bright young minds be recruited to build bombs instead of the next generation of solar batteries. No longer would nations punish nations with sanctions; now they would work together to develop a clean energy budget for the next fifty years, a budget which would guarantee the democratic distribution of jobs, of electricity, of schools, and of sanctuaries.

Yes, living in a world at peace . . . would open unprecedented opportunities for progress. Think what the kids could do, if they didn't grow up in war zones and refugee camps.

When the voting booths closed at 20:00 on Saturday evening in Tahiti—after thirty-six hours of voting without a shot fired—the peoples of the world—on Saturday night, on Sunday morning, on Sunday afternoon, on Sunday evening—raised their glasses with a toast, “Without a shot fired!” They had done it. They had proven that they *could* do it.

Now, whatever shots might be fired in the future, whatever barrel bombs might drop from helicopters, whatever suicide bombs might explode in a market, whatever nuclear warheads might be added to the arsenal, they would be immediately and vehemently condemned as crimes against humanity, crimes against the Earth.

Children would grow up in an entirely different world. Their instinctive sense of right and wrong, their natural understanding of fairness, their openness toward other children, would no longer be stifled by adults who taught them to hate “the enemy”, to seek advantage through military power, or to prove their manhood with a gun.

Yes, we raised our glasses, holding them between fingers and opposable purple thumbs, as we toasted, “Without a shot fired!”

If we listened carefully, we might have heard the Creator, peering down at his prodigal children, as he whispered, “Amen.”

Chapter Fifty-Three

At 08:00 on Sunday morning in Oslo, the voting booths were closing in Tahiti, and thus Referendum Day had successfully made its way around the world. The White Caps had planned a celebration picnic at Sognsvann; we would meet at the pier and picnic tables at one in the afternoon.

Erling and I would be the first ones to arrive, because we were already there. We had voted early on Saturday morning, he in Halden, me (with my mother) in Ås. Then Erling, with his camping gear, had ridden the train north to Moss, where he boarded the train to Ås, arriving at 10:49.

I, with my camping gear, boarded the last car on the train—Erling was standing in the doorway when the door opened, beaming at me—then we rode together to National Theater, where we changed to the Metro to Sognsvann. Thus by noon on Saturday, we were hiking with our backpacks on the path along the shore of our beloved lake toward the pier.

We would spend the day at the lake—a sunny day with scattered white puffy clouds in mid-September—then we would sleep in our sleeping bags on the end of the pier beneath the stars.

When the White Caps arrived at one o'clock on Sunday afternoon, Erling and I would have already spent more than a day at Sognsvann.

We wanted time, you see, and the perfect place . . . to discuss our wedding plans.

We lived in a different world now, or so we hoped.

When I was a little girl not yet a year and a half old, two jets flew into twin skyscrapers in New York City. My mother—a young mother with her first child—was deeply shaken. The American president had told the world, Norway included, “You are either with us or against us.”

Would America drag Norway into a war? Who was the enemy? Would “terrorists” soon arrive in Oslo?

I was not quite three years old when President Bush launched his war against Iraq. Five years later, when Marius was born, the war in Iraq—as my mother later told me—“had become a civil war, completely out of control.”

My childhood in Ås was certainly safe, but as bombs exploded in European cities, in Russian cities, in African and Asian cities, my mother never stopped

worrying. When a bomb exploded in a crowd of spectators at the Boston Marathon, she wondered, Who's to stop a terrorist from attacking the children's parade on the Norwegian Seventeenth of May?

Then, when I was a bored teenager of seventeen, my mother took me to the Greek island of Lesbos, where, on a beach at night, we saw for the first time the faces of people fleeing from a war. I carried a little girl, limp in my arms, up the beach to my mother, a nurse, who listened with her stethoscope to . . . yes, a beating heart.

Was this a world into which parents wanted to bring a child?

What a blessing, then, that Erling and I could think about marriage, about a wedding, about bringing children into the world, when the world was on the threshold of an entirely new era. Bad enough that we and our growing family would have to contend with global warming. But at least we could do so in a world at peace.

To fight one dragon would require heroic efforts. But to fight two dragons . . . no, the dragons would win.

So we were blessed, Erling and I, deeply in love at the dawn of an era of peace, an era of hope. But with that blessing came a lifetime responsibility: We could never go back to the Dark Ages of war, but must always build a stronger Peace. A stronger Peace. A stronger Peace.

Everything else—our Renaissance—would be built on that granite foundation of Peace.

* * * * *

We lay in our sleeping bags—zipped together!—on the end of the pier, looking up at the stars. The moon, three nights before full, was a radiant egg in the southeastern sky; its glow enabled us to see only the brighter stars. My old friends in the Summer Triangle were high overhead: Deneb, the brightest star in Cygnus the Swan, sailing with its long neck toward the southwest; and Vega, the brightest star in the sky tonight, the Queen of Summer; and fainter Altair, in Aquila the Eagle, the third corner of the triangle, reaching toward the south. My three bright friends, now at the end of summer, would glide slowly across the lake toward the west, while the winter stars crept up into the eastern sky, above the trees at the foot of the pier.

Our extraordinary summer was nearly over: the summer of 2021, when we all got an education from the veterans, from the refugees, from each other.

The breeze had settled; small waves no longer lapped along the pier. The seagulls, noisy all day, had settled down wherever it is that seagulls sleep. The silence of the night wrapped over us like the most comfortable of blankets.

We had spent hours discussing the wedding, our marriage, our children. My thoughts had reached far into the future.

“Erling, where will we be in fifty years?”

He did not answer right away. His thoughts too were reaching some great distance.

“Well, fifty years from next June, we’ll be celebrating our fiftieth wedding anniversary.”

“What a gift that would be.”

Half a century together. A tiny blip in time, but for us together, a bountiful eternity.

He rolled onto his side and looked at me, his pensive face lit by the moon.

He asked me, “Do you know which one is my favorite?”

“Favorite what?”

“Favorite verse. ‘And God said, “Let there be Peace.”’ As if He too wanted to bring to an end something that He had never thought of, never imagined as a part of His creation. This odd behavior, invented by His finest creatures, of *killing* each other in war after war. He must have wondered, ‘Where did *that* come from?’ Finally He had enough, so He commanded something that should have been obvious, ‘Let there be *Peace!*’”

Erling lay back down and looked up at the stars. “He didn’t want to get too close to those maniacs, so He let you say it for Him.” Erling shouted up to the stars, “Let there be *Peace!*”

We heard a faint echo from the far side of the lake.

And then we were quiet. For the Creator had spoken. And our job was to listen.

Our job was to listen.

Or we were not worthy of His creation.

* * * * *

Aili Biriita stood in the grass slightly above us on the gently sloping shore, with a backdrop of spruce and birch behind her, facing the White Caps at the picnic tables and on their towels and blankets. Everyone was there, the valiant White Caps who had worked so hard through the summer—including my mother and Marius and Sigurd—as well as their families and friends. The Sunday afternoon sunshine warmed their backs, and shone on Aili's face.

"I wish Nansen could be here today," she said with a strong voice that reached all of us. "Fridtjof Nansen, who explored the Arctic because he loved the Arctic. And who spent the second part of his life rescuing the victims of war."

She looked at us, her tightly woven team.

"I have seen many pictures of Nansen, but I have never seen him smile. He looks stern, and dour, and somewhat aloof, as if he would scold the world for its endless squabbles and shabby wars. But he knows that the world would never listen. So he scowls, and remembers the polar nights with their ethereal beauty. And their enormous silence, interrupted now and then by the sifting of the wind, by the cracking of the ice."

She paused.

"Nansen drew stunningly beautiful pastel pictures of the northern lights, rippling into the distance. He drew astonishingly realistic pictures with pen and ink of the polar bears who ambled across the ice near the ship. And he photographed that ship, his sturdy *Fram*, in the moonlight, with the four wings of its wind turbine standing proudly above the deck."

This was Aili. She took what we had learned in high school . . . up to a new level of meaning.

"I could add that I have seen many pictures of Sigrid Undset, Norway's great author, but I have never seen her smile. On the five-hundred *kroner* bill, she does not scowl, but she looks as if she has been sad for a long, long time. In her pictures—black-and-white photographs—she is perpetually sad.

"Like Nansen, Sigrid Undset lived in two worlds: the world of the past, as she described medieval Norway in her novels, and the world of the present, with a Lutheran society that never accepted her Catholic faith, and a war which snatched away her oldest son during the very first days of the invasion.

"Sigrid Undset circled the world as she fled from that war. She traveled first, with her son Hans, to the sanctuary of Sweden. Then they spent fourteen days in Russia: they flew to Moscow, then traveled ever eastward on the Trans-Siberian

Railway to Vladivostok on the coast of the Pacific Ocean. She and Hans visited Japan, then they crossed the ocean to America, where they eventually settled in Brooklyn, close to New York City. Sigrid spent the remaining years of the war speaking and writing on behalf of her beloved Norway, and of the Jews of Europe.

“When she and her son were finally, at the end of the war, able to return home, completing a full circle around the world, she discovered that the Germans had occupied her house in Lillehammer, and had smashed her father’s writing table.”

Aili paused.

“Yes, Nansen scowled, and Sigrid endured the burden of her deep sadness.

“So I wish they could be here today, when so many people around the world have reached out the hand of friendship. I think that Nansen would be heartened by the end of the international arms trade, which did so much to drag millions of soldiers into the nightmare of World War One. I think that he would be heartened to know how many people have stated that they will never fight a war beyond the borders of their own countries. They will defend their home, but not a step further.

“I think that Nansen, who worked so hard to establish the League of Nations, would be heartened to know that so many people today believe that peace is a basic human right.

“And the man, the *visionary*, who equipped his ship with Norway’s first wind turbine, which powered the lights on the *Fram* during the long Arctic nights, would be greatly heartened to know that today, countries around the world are harnessing the wind with growing multitudes of wind turbines, on land and even out in the sea.”

She paused, smiling.

“Just imagine: If Fridtjof Nansen could ride a bicycle in the Netherlands during the springtime, when a colorful patchwork of tulips and daffodils covers the land, he would see the old Dutch windmills from Rembrandt’s time.

“Yes, but there is something more in this picture of Dutch perfection: Nansen would also see the majestic modern wind turbines which tower high above the old wooden windmills. He could watch their long slender blades spinning steadily in the wind off the sea.”

Aili held her hands out, gripping the imaginary handlebars of a bicycle. “If Nansen on his bike, breathing air which smells of fresh flowers, breathing air which smells of brine from the sea, could watch the spinning blades of those modern turbines as they power the lights of Europe . . . I think that his eternal scowl would transform into a good sturdy smile.”

She paused, letting the Norwegians in the audience think of Nansen riding his bike through a landscape of wind turbines and tulips.

Aili continued, “And if Sigrid Undset—who lived long enough, until 1949, to read in the newspapers in August of 1945 about the nuclear bombs which destroyed Hiroshima and Nagasaki—yes, if Sigrid Undset could be with us here today, when so many people around the world are determined to free themselves from the curse of nuclear weapons . . . I think that her sadness would be replaced by the determination to write a new book, with new characters, about a new epoch of history. And as she crafted her new story, the author who wrote as much about faith as she wrote about history . . . would begin to smile.”

Aili swept her arm toward her audience, her friends, her team. “So I thank you, my magnificent White Caps, for helping the world to close the old book—a long tragic tome in which War and Plunder were again and again the twin themes—so that we can now open a *new* book, with blank pages awaiting a bold and exciting tale. A tale in which the heroines and heroes . . . are ordinary people working together to build a far better world.”

She took several long breaths, and looked at our faces one by one, before she was finally able to say, “Nansen’s polar bears join me as we say to you, ‘From deep in our hearts, Thank you. Mange takk. Shukran. Ollu giitu.’”

With both hands over her heart, she bowed to this extraordinary group of people wearing their round white caps.

End of Volume II

Volume III

Long Bold Strides

Part XI

Two Magnificent Decades

Chapter Fifty-Four

Hello, this is Marius. I'm taking over for a while. My sister Anna is busy getting married and (two years later, with her human rights law degree on the wall) having a baby, a little girl named Helena. My mother is busy being a thrilled grandmother. Erling is "the best father in the world", as Anna tells us again and again. His parents have joined my mother in the Grandparents' Club.

So . . . Hello, this is Marius.

I was only thirteen, a year short of fourteen, on Referendum Day in September of 2021, and thus too young to vote. But that didn't stop Sigurd and me. As White Caps, we spent the summer before the Referendum researching war crimes in Syria, then adding what we learned to the growing tidal wave of evidence against the crimes of war itself. We dug into the United Nations Charter; we dug into multitudes of media reports, especially from Al Jazeera, about the war in Syria; we interviewed refugees in Oslo; and extremely important, we talked on the phone with Loreen and Lamar, building their new lives in Bremerhaven, Germany.

Pretty good for two kids thirteen years old, not yet in eighth grade. Our website and blogs were used that summer by people around the world as they knocked on doors and educated voters about the crimes of war.

And . . . our information was so comprehensive, and Anna was so impressed, that she continued our research and wrote her master's thesis on "War Crimes in Syria: the Legal Violations of Human Rights in an Extremely Complex War".

Anna Jakobsen, I am proud to say, graduated from the Norwegian Center for Human Rights with honors.

* * * * *

After the Peace Referendum of 2021—a day in the history books of every country around the world—I was free to go back to what I loved the most, the oceans.

Why was a kid growing up in Ås, a little town surrounded by farm country, fascinated with the oceans? I think the origin of my passion must have been visiting that sandy beach in Steigen when I was five or six years old. It's a very long beach, at least a kilometer long, curving like a bow, so that I could walk and walk alone, away from my father, looking for shells, looking for feathers, and just listening, listening,

listening to the roar of the giant waves that rolled in from the sea. I could sit on a bank of sand and watch those waves forever. They would rise up as they neared the shore, with a long bright sheen of sunlight on their backs . . . and then crash onto the beach and fling a mat of white foam up the slope toward my bare feet. The water was so cold that I could not imagine that anything could live in it. But a multitude of creatures did: I had shells and fish bones as proof.

I would have loved to return to Steigen every summer, but there was some family problem—my father had insulted my mother’s parents—so I was stuck every summer in Ås, riding my bike with Sigurd on the farm roads to the little village of Hvitsten on the Oslo Fjord, where we would have lunch on the old wooden wharf and look out at the gray water of the fjord and the ships sailing north and south. No razor clams, no thundering waves. No footprints in the wet sand, unless we walked along the tiny, crowded beach.

And then, on the day that my father came to my school with a letter for me (I was in seventh grade then), the principal, Dr. Sverdrup, told me that she had ordered a library book for me, about the oceans, by a French person, Jacques Cousteau. Sigurd and I went to the library, where the librarian had **The Silent World** ready for me to check out. Dr. Sverdrup had told me that I could spend the day in the library, reading. And so while Sigurd wrote an essay that was past due, I met Captain Cousteau and joined his crew on his research boat, the *Calypso*, as they explored the underwater world of the Mediterranean Sea.

I was entranced. The men wore SCUBA tanks—Self-Contained Underwater Breathing Apparatus—on their backs when they dove beneath the surface, so that they could spend an hour swimming with schools of fish (they met a friendly grouper), exploring a coral reef, and discovering new species of sponges and crabs. What intrigued me the most was that Captain Cousteau and his crew swam with these creatures *where they actually lived*. These were not fish in a net hauled up to a fishing boat; these were fish and turtles and eels in their underwater homes, living their natural underwater lives. Here was the world that *I* wanted to explore, with a group of men who were totally dedicated to their work.

During the following months, I read Jacques Cousteau’s other books and articles, and I watched his amazing underwater films (which the school library ordered for me from a university library). When we were in Paris, I found **Le Monde du Silence** in a book shop, which I read with my sturdy dictionary from cover to cover.

And then Erling told me that he wanted to sail to Tahiti, where we could explore the coral atolls. We did some online research together and learned about the University of French Polynesia, on the island of Tahiti, which had an undergraduate program in “Oceanic Environments”; a master’s program in “Environment and Ecology” with part of the study in Paris, part on Tahiti; and a Joint Research Unit in “Pacific Island Ecosystems”, in partnership with other Pacific institutes.

Perfect. From that day on, I was a star student in every class at Ås middle school, especially in science and French. Dr. Sverdup and Anna helped me to get a guest library card at the University of Oslo. At the university book store, I bought text books on oceanography, marine biology, Arctic ecosystems, and fisheries. I found some books as well as about French history and literature. (My favorite book: the poems of Jacques Prévert.)

I subscribed to **Le Monde** online and read the latest news from Paris.

Voilà!

* * * * *

The more I learned about the oceans of the world, the more I understood that they were the key to the future of planet Earth. Somewhere between fifty and eighty-five percent of the oxygen in the atmosphere is produced by algae in the sea, far more than the oxygen produced by trees on land. The various forms of algae require water at a certain temperature, and with a certain chemistry. As our oceans become warmer, more acidic, and in some places less salty because of melting ice, the algae gradually loses its habitat.

Take a deep breath. Most of the oxygen which you inhale, and which passes from your lungs into your bloodstream, and which then flows in your arteries and capillaries to every cell in your body . . . came from tiny one-celled plants drifting in the oceans. As we continue to burn coal and oil, we wrap a blanket of carbon dioxide pollution around the planet, a blanket which holds in the heat from the sun. Much of this heat is absorbed by the oceans, down to increasing depths.

Much of the carbon dioxide in the atmosphere is also absorbed by the oceans. Molecules of carbon dioxide combine with molecules of water to form carbonic acid: $\text{CO}_2 + \text{H}_2\text{O}$ produces H_2CO_3 . The oceans thus become increasingly acidic.

Even if we stopped burning coal and oil today, the heat and the acidity which have altered the health of the oceans will remain for a long time, perhaps centuries. We *know* this, and yet . . . we continue to burn coal and oil.

The two Referendum Days, however, made a major difference in how the people, especially the young people, on planet Earth *think*. The older folks were reluctant to change their ways: they were skeptical about electric cars, about wind turbines in their backyard, and especially about losing the money which they had invested in oil. But the younger people, who had been thoroughly awakened and educated by the two referendums, decided to wait no longer for the older folks to finally get around to doing something. The referendums had been a global mandate, placing into *their* hands the future of *their* world.

Though the tallies following the Second Referendum varied in countries around the world, the global response to all four statements had been over 70% agreement. Over 70% of the people agreed that the international arms trade should be abolished, forever. Over 70% of the people, and in some countries over 95%, agreed that nuclear weapons should be abolished, forever. Over 85% of the people agreed that military forces should remain in their own country, in order to protect their own country, and should *not* invade any other country. And over 90%, in some countries over 95%, of the voters agreed that people have the human right to live their lives in peace.

The people had spoken: they wanted sanctuaries, they wanted a healthy world, and they wanted peace. *Now*. Not some day when the oil runs out. Not some day when this superpower or that superpower controls the Middle East. Not some day when an exchange of nuclear weapons takes us all beyond the final tipping point.

Yes, the two referendums had been a mandate. The young people were not going to wait any longer. Their time had come. It was their energy, their determination, their global decision to rise up and roar, which enabled humanity to move on from the madness of the 20th century to the unprecedented progress of the 21st century. The young people teamed up with clean energy companies and harnessed more sun and wind during the next twenty years than anyone thought possible. They teamed up with the women of the world and gave that long beleaguered half of humanity their *full* human rights. They teamed up with the schools and the colleges and the universities around the world and rewrote the curriculum, so that students became citizens of an entirely new epoch in human history. They entered politics, running and winning in election after election, so that no longer did the Old Boys block every step of progress.

Yes, the two decades from 2021 to 2040 took us from the brink of disaster—we saw more and more clearly as the years passed how close we had come to ecological disaster, to military disaster—and placed us on the solid ground of progress and peace. As the global energy grid brought the power of the sun and the wind into every home around the world, people believed that Yes, we *were* going to build that Renaissance.

And the more they believed, the harder they worked.

Because every girl in the world now attended school for as long as *she* decided, and graduated with the degree which *she* felt she deserved, the talents and the energy of fully educated women contributed immeasurably . . . to the progress of civilization.

Women with doctoral degrees were designing the next generation of floating offshore wind turbines. Women with law degrees—like my wife from Tahiti—took the plundering industries to court, so that life could return to the seas.

The women of the world taught the men how to negotiate, on behalf of future generations, without recourse to the weapons and the profits of war.

Yes, the women blessed our poor battered world in ways that the Old Boys never could have imagined.

During those two magnificent decades—a golden age when a global generation fully united with a clear purpose—Marius Jakobsen had the great good fortune to be alive. We rode at full gallop through those years. And we celebrated, in 2039, exactly one century after Germany invaded Poland and thus commenced the greatest tragedy of the 20th century, the first year of global *cooling*, when snow fell on Aili's tundra at the beginning of a fully normal winter.

It was the first year of global cooling, when the Arctic ice cap began to grow, rather than to shrink, so that in the spring of 2040, after the dark polar night, the ice cap was larger, and thicker, than it had been for the past twenty-five years.

Yes, the first year of global cooling, when the algae and the diatoms and the pteropods and the krill and the herring and the cod and the seals and the polar bears and the great whales, sensing that their water was cooling, was becoming less acidic, and more salty, began to multiply . . . as in days of old, when their bountiful populations had filled the seas.

During the first year of global cooling, the cap of ice on Greenland stopped melting, and the rivers of fresh water stopped pouring over the edge into the sea.

During the first year of global cooling, the ice began to form, instead of melt, in the Himalaya Mountains, and the great rivers that watered the land where a billion people lived now flowed abundantly and blessed the farms.

During the first year of global cooling, the rains fell in the spring and in the summer and in the fall, and the crops were not parched, but grew in great abundance.

Yes, when weather stations around the world announced, during 2039 and into 2040, that land temperatures and sea temperatures and atmospheric temperatures in the northern hemisphere and in the southern hemisphere had stabilized, and were beginning to go down, that was a moment in human history when we reached out and shook our neighbor's hand and said, "Thank you."

And that was a moment when we folded our hands in prayer and said, "Thank you."

Because we were going to make it. We were going to survive.

We could keep building our Renaissance.

Chapter Fifty-Five

Marius here. Glad you came along.

I will never forget that handshake in the International Space Station, when a Russian hand and an Afro-American hand reached out and shook hands while orbiting the Earth. Millions of people around the world saw that handshake. It was a moment of Hope.

When Russians voted in the Referendum of 2021, they joined the world in voting for peace. They joined the world in voting for an end to nuclear weapons. They, who had been invaded by the Mongol Horde, by the French, by the Germans, wanted no more war.

And, despite their oil . . . the Russians were finally ready, years behind the rest of the world, to build their first wind turbines.

It was the Danes, the gregarious people of an industrious little country, who took the first step toward bringing Russia into the clean energy Renaissance.

The Danes were the visionary pioneers in the development of wind turbines. When Saudi Arabia strangled the world with its oil embargo in 1973, Denmark was the only country bold enough to retool its economy in a new direction. The Vestas company, which previously had built iron farm implements and refrigerated ship containers, produced the first commercial wind turbine in 1979. During the 1980s, Vestas reached out to China, the backward giant that wanted to join the modern world. Vestas helped several Chinese universities to develop programs in wind turbine engineering: that visionary cooperation was the beginning of China's heroic efforts today in both wind and sun energy. Three Danish wind turbines from the 1980s are *still* spinning in China, producing electricity.

In America, meanwhile, Ronald Reagan was making sure that the newborn wind industry in California—also using Danish turbines—died an early death from lack of investments. That was the beginning of the Republican Party's unrelenting efforts to stifle clean energy for decades to come.

In May of 2018, a couple years before the First Referendum, Vestas opened a state-of-the-art factory in Nizhny Novgorod, Russia, where nacelles—the large housing at the top of a wind turbine which contains the generator—would be built. The agreement between Russia and Vestas stated that a substantial percentage of the components of the turbines must be built in Russia, thereby providing *jobs* and

training to Russian workers. Other Vestas factories, to be built in various Russian cities, would manufacture the wind turbine blades, and the tubular steel towers. Russia would build new factories which would manufacture the multitude of other components. Trade schools and universities would become increasingly involved as they developed new engineering programs.

This seed from Vestas, planted in Nizhny Novgorod, sprouted in fertile soil. Russians have an inborn talent for ballet, for chess, for mathematics . . . and for engineering. The Soviet *Mir* space station, built to orbit the Earth for five years, remained in space for fifteen years, from 1986 to 2001, outlasting the Soviet Union. 125 cosmonauts and astronauts from twelve different nations worked together, performing over the years roughly 23,000 scientific and medical experiments. The first crop of wheat to be grown from seed in space . . . flew in the *Mir* at an altitude of 260 kilometers.

The Soviets (and after the termination of the Soviet Union in December, 1991, the Russians) proved to the world not only their skills in engineering and science, but their ability, and willingness, to work with other nationalities, including their Cold War enemy, the Americans. When the American Space Shuttle docked with the Russian *Mir* for the first time in June, 1995, the cosmonauts and astronauts shook hands. The peoples of those two great nations, after half a century of Cold War and massive nuclear stockpiles, felt a blossoming of hope.

So when the Russians, in May of 2018—at a time when relations between Russia and America were once again worsening—began to work with the Danes in developing an entirely new industry in Russia, Russian engineers rose to the challenge brilliantly. The Russian government reduced its reliance on oil as the foundation of the economy, and now invested into wind turbines in the north and solar collectors in the south. The Russian clean energy revolution transformed the country. During those two historic decades, 2021 to 2040, Russia reached out to the world, and the world reached out to Russia. Clean energy companies worked together, universities worked together, and governments worked together as the international clean energy grid grew from Denmark in the west to Vladivostok in the east, and from Siberia in the north to Kazakhstan in the south. The grid linked Russia with China, with Japan, and a dozen other countries in southeast Asia where political tensions had simmered and boiled for centuries.

Yes, that international clean energy grid did as much for the building of peace on planet Earth . . . as all the political treaties signed in the national capitals. The grid

was built by the peoples of the world, working together to solve the engineering problems, the economic problems, the legal problems, and the ecological problems. And all the while, they were learning about each other. They shared their music, their food, their mutual toasts, and their growing respect. Russia was no longer on the other side of a wall, a dark and dangerous mystery threatening the rest of the world; Russia became the Heartland—one of several—of the Renaissance of the 21st century.

Russia contributed generously to the creation, and the nurturing, of the Arctic Sanctuary. Profoundly grateful that their long northern coastline would not face hostile military forces in the Arctic Ocean, the Russians willingly reduced their own fleet to a minimum. They negotiated earnestly for an end to all nuclear weapons, and, in 2026 (as we shall see), offered transparency without limits to nuclear inspectors who verified that production had come to a complete and permanent halt.

The Russians, proud of their heritage as Arctic explorers, and as Arctic scientists, welcomed scientists from around the world to join them as they measured the annual fluctuations of the Arctic ice cap, took the temperatures of the sea and atmosphere, and recorded variations in the Arctic weather, from aboard ships and while looking down from shared satellites. It was the Russians—yes, the Russians—who first noted in 2039 that the Arctic Ocean was *cooling* in some areas, and that the ice in certain regions had increased in both area and thickness. It was the Russians who announced this good news to the world. And the world cheered.

As a first-year graduate student in marine biology, with a specialty in cetaceans (whales, dolphins and porpoises), at the University of Bergen, I had the great good fortune to spend the summer of 2031 on a Russian research vessel cruising along the edge of the Arctic ice cap in July and August. I of course wore my (somewhat worn) white cap. When I explained its significance to the international scientists on board, they looked at me as something of a hero. “*You* were one of the original White Caps!” they marveled. “*You* worked with the legendary Aili Biriita Gaup!” They had all seen her film from over a decade ago, and had followed her career as she successfully built a patchwork of sanctuaries around the planet, providing safe and prosperous homes for her indigenous peoples. That I had known her, had worked with her, had been in Paris when she spoke to the world—in over a hundred simultaneous translations—well, never mind that I was a lowly graduate student. I became an honored colleague.

But more than that. I grew up in a country where friendship is muted. The quiet Norwegians duck for cover if someone calls out a hearty “Hello!” People whom you have known for years may disappear without a word . . . and you will never know why.

Neighbors rarely speak to each other, unless it's about building a wall along a property boundary. Norwegians have much in common with their beloved codfish; the cod is gray, and cold, and silent, and the Norwegians are . . . well, you get my drift.

So what a treat it was for me, what a *discovery*—when I flew in June of 2031 from Tromsø, Norway to Arkhangelsk, Russia to board the research vessel *Severnoye Siyaniye* (*Aurora Borealis*, or Northern Lights)—and then to encounter Russian friendship.

When I first appeared at dawn on the deck of the ship, ready with binoculars to search for the misty breath of a blue whale, a Russian who had sat at the dinner table with me the evening before called out with his big booming voice, ‘Marius! You missed a pod of *orca* twenty minutes ago. But we will see more. Come, I have coffee in a thermos. Did you bring a cup from the kitchen?’

Few Norwegians would ever have greeted me so warmly.

So I learned to bring a cup from the kitchen, and to call back, “Sergei! I have brought some hot rolls!” (The rolls and cup were in an insulated box with a handle, a Russian invention for picnics in the Arctic.) Sergei and I would stand at the rail and look out at the ragged edge of the Arctic ice cap—which, from close or from afar, we would continue to watch for the rest of our lives—while we ate our hot rolls and drank our hot coffee, and while Sergei told me, in rough but adequate English, everything he knew about blue whales and killer whales (*orca*) and beluga whales and narwhals. I learned as much from Sergei as I had learned back in the academic world, but now there was something more. Whereas my professors spoke while pointing with a red laser beam at a Powerpoint illustration, Sergei spoke from the heart. He loved those whales, and he was deeply glad to know that someone from Norway *also* loved those whales. Together—“without any fucking politics,” as he liked to say in his vibrant English—he and I would take care of the whales, and make sure that they always had their home.

The Russians are complex, and they have been through a long and dreadful history. But they have a strong heart, and a powerful sense of friendship that lasts a lifetime. Yes, if I hadn't found my bride in Tahiti a couple of years later, I would surely have married a Russian.

Even when I was on another ship exploring the atolls of the South Pacific, studying the whales and the dolphins and the coral reefs on the opposite side of the planet, I followed the progress in Russia. Sergei and I still write back and forth, sharing pictures from our expeditions, research papers, news about our families, and comments

on the world. He has done extraordinary work, lowering microphones into the sea and recording the underwater communication of cetaceans in the Arctic. He can pick out the voices of individual whales, and hopes that one day, he himself might be able to communicate with them. If he finds a big-hearted blue whale, I am sure they will have a lot to talk about.

* * * * *

Aili has worked very successfully with the Russians on behalf of the Sami people who live on the Kola Peninsula. As Guardians of the Arctic Sanctuary (they share that honor with other indigenous peoples who live along the northern coast of Siberia), their culture is now protected. Their schools work closely with the Sami University in Aili's hometown of Guavdageaidnu, on the tundra of northern Norway, as the Russian Sami work to preserve their language, to publish books for adults and children, to research and document their history, and to market their reindeer products in the modern world.

Russia had struggled for well over a century in its search for an economic system which would lift its people out of poverty and isolation, but every system eventually failed. In 1861, Czar Alexander II freed the serfs as part of a program of agrarian reforms, but the people living on the land remained mired in poverty.

In 1917, Lenin swept away the monarchy and replaced it with Marxism, which would raise up the workers (and to a far lesser extent, the farmers) of the Soviet Union. But in December of 1991, after seventy-four difficult years—and despite Mikhail Gorbachev's courageous efforts—Soviet socialism came to an end.

During the 1990s, the decade of deep economic depression, Russians struggled at the brink of chaos to survive. To their great credit, they *did* survive, eating potatoes which they grew at their *dachas*. And, during that long, dark, cold, dangerous decade, they remained peaceful. No riots, no military repression in the streets. Peaceful.

Various American economists visited Russia in an effort to guide the giant nation, which spanned eleven time zones, toward a capitalistic economy, but though they knew a great amount about supply and demand, they knew very little about Russia, and this brief effort failed as well.

In May of 2000, Russia's new president, Vladimir Putin, took control of the economy. He relied not on capitalism nor on communism, but on the high price of oil to build up his country's economy. He provided jobs for his people, who now earned enough that they could begin to build a new life. Equally important, Putin gave them

back their dignity. The Russian people were certain that America wanted Russia to be weak, but now, while oil enabled Russia to rebuild as a modern nation, they could once again be proud of who they were: a great people living in a great country.

But the price of oil is unreliable. In the long run, it is a poor foundation on which to build a national economy. Especially if the military budget grows every year, in the eternal race to build more submarines, more aircraft carriers, more missiles, and more nuclear weapons.

Finally, after the two global referendums, Russia discovered the key to long-term economic prosperity: clean energy.

The sun may shine during the day and then disappear at night; the wind may blow on some days and disappear on others; but they were far more reliable than the price of oil. And when the countries of the world joined together to build a global grid, providing jobs in a democratic manner, and education in a democratic manner, and the magical power of electricity in a democratic manner, an entirely new economic system was born in Russia.

To power the world with clean energy: that was an enterprise which would last for decades, perhaps to the end of the century. Clean energy brought not just jobs, but lifelong careers. To build a global system of clean energy transportation was an epic undertaking. To build energy-efficient homes, and factories, and even entire cities, all powered by clean energy: yes, this was an epic undertaking. To harness the energy of the wind and the sun into entirely new ways of growing food: this too was an epic undertaking. To harness the wind and the sun so that sea water could be desalinized into water for drinking, water for irrigation: again, an epic undertaking.

All of this epic work required people with an epic spirit of determination. They would not compete with each other for the rare and diminishing resources of the world, but instead would work together, so that everyone's light bulb was lit, everyone's computer was connected, everyone had a job that reached far into the future, and everyone had the welcome peace of mind that they were on the right track.

Under these conditions, Russia flourished. China flourished. India flourished. Ethiopia flourished. Morocco flourished. Brazil flourished. Mexico flourished. Scotland flourished. California flourished. Iowa flourished. New York flourished. Little Denmark flourished.

Even my own country, Norway, after its immensely profitable "oil adventure", quietly admitted that all of those barrels of oil which had been sold to the world . . . had been burned, adding immense amounts of pollution to the atmosphere. So the

good people of Norway capped their last well, put their last petrodollar into the world's largest sovereign fund, and turned their attention to building floating wind turbines in the seas around the world.

As a Norwegian who deeply loved the oceans, I said a quiet "Hurrah!"

* * * * *

Russia no longer threatens Poland, or Estonia, Latvia, and Lithuania. Russia no longer keeps the countries of NATO awake at night. Russia no longer sends hidden submarines laden with nuclear missiles to prowl along America's Atlantic coast.

Instead, Russian engineers work with engineers from Mongolia, and Kazakhstan, and Georgia, and Ukraine, and Moldova, and Romania, and Bulgaria, and Poland, and Belarus . . . and little Denmark, as together they harness the sun, as together they harness the wind.

The Russians would like to remind us that the name of their space station, *Mir*, has a special meaning for the people who survived the Siege of Leningrad, the people who survived the Siege of Moscow, the people who survived the Siege of Stalingrad, the people who lost over twenty million citizens of the Soviet Union during the Great Patriotic War, also known as World War Two.

Mir means Peace.

Chapter Fifty-Six

The sanctuaries were a growing success. Based on the model of the Arctic Sanctuary, which protected both the seas and the land above the Arctic Circle, sanctuaries were created in the forests of the world, on the open plains, in the deserts, around lakes, along rivers, along coastlines, and in the seas. The Native Peoples who lived in these areas of environmental importance were also protected, for they became the Guardians of the Sanctuaries.

Rather than cut down the forest so that a small number of “investors” could make a profit, the forest became a sanctuary, a “sacred place”, which people could enter as if they entered a church, a mosque, a synagogue. They could study nature in its purist form, and thus learn lessons both biological and spiritual. Researchers could learn from the people who lived in the forest about medicinal plants; their findings would *not* be patented by a large corporation which would corner the market on profits. The knowledge about medicinal plants would be *shared*, as a gift from Mother Nature, from planet Earth, from the Creator . . . with the peoples of the world.

Students were welcome, so that they could understand more deeply the planet which their generation was determined to protect. And what they learned about the relationship between trees and local weather, about biodiversity in a forest stream, about the depth and chemistry of forest soil, about the importance of frogs and bats and bees, they took home with them, so that they could look at their own woodlands and streams and meadows with fresh eyes.

The profits from cutting down trees, from burning trees, from digging mines that spew their waste into streams and ponds and fjords, are short-term profits. The profits which accrue from working with *Nature as a member of the board of directors* are long-term profits. The sanctuaries taught us to think in terms of decades, rather than quarterly earnings. The sanctuaries taught us to think in terms of health—physical health and spiritual health—on a regional level, on a national level, on a planetary level, rather than “the bottom line”. The sanctuaries taught us that the cure for an epidemic of depression, the cure for teenage suicide, the cure for sudden and random violence, was not more pills, but a quiet afternoon in a green place, with a growing sense of Hope.

Some of the sanctuaries were large, encompassing most of the Amazon rain forest, encompassing an archipelago of islands. Some of the sanctuaries were small,

created by students on the land of an abandoned farm. Or along the banks of a stream once filled with trash. Or on a beach where plastic once covered the sand. Schools created sanctuaries, businesses created sanctuaries, churches created sanctuaries, families created sanctuaries. These new sacred places, legally protected, kept growing and growing.

From these sanctuaries blossomed a new kind of music. A music of peace, a music of reverence, a music of hope. Voices which never made it to Broadway in New York, the Big Apple, and voices which never made it to the Top Ten in Los Angeles, the Big Grapefruit, now found a home in a place where the birds sang, where the crickets rasped, where the stream gurgled, and the wind sifted through the treetops.

People listened again to Ferde Grofé's "Grand Canyon Suite", and to Aaron Copland's "Appalachian Spring", and to Claude Debussy's "La Mer". They listened to Paul Winter accompany with his saxophone the song of a humpback whale. And they discovered that other cultures had their own symphonies, their own songs, about forests and mountains and seas around the world.

Composers no longer wrote about the Age of Anxiety, but about a new way of thinking, a new way of living. The rage and the bitterness in Rap diminished as cities understood that sanctuaries were just as important as parking lots. Racism did not disappear overnight, but as the shared world of the sanctuaries continued to grow, and as the poisoned cage of ancient hatreds seemed more and more pointless, people began to sing a new kind of song.

They began to sing the hymns of the 21st century.

Economically, the sanctuaries contributed abundantly to the steady financial growth of the 21st century. The greener the Earth, the healthier the creatures which lived on it, including the people. The costs of health care gradually declined, while days of productivity on the job and in school gradually increased.

When a coral reef became a sanctuary, populations of fish and lobsters returned to their former abundance. Fishermen, following the guidelines of sustainable harvesting, no longer struggled to catch the last of the fish in the sea; they could now continue to work in their proud profession, grateful for a lifetime career. They too became Guardians of the Sanctuary.

When an archipelago of islands such as the Lofoten Islands of Norway—an arm of towering, jagged mountaintops reaching out into the sea—became a sanctuary

where drilling for oil was forever prohibited, people no longer set their sights on the last barrel of oil, but on developing a world-class oceanic classroom where students from many countries could learn about becoming Guardians of the Sea.

For over half a century—since the end of World War Two, and during the entire Cold War—Norway and Russia had developed a fisheries quota system which maintained a healthy population of codfish. Norway and Russia shared their research on the cod, which spawned in Norwegian waters but matured in Russian waters. How did two Cold War “enemies” manage to work together so successfully, while the Americans and Canadians fished their cod to commercial extinction? Such a lesson could be learned in a Lofoten classroom.

Sanctuary classrooms, sprinkled around the world, examined economic as well as environmental questions, and thus became integrated with business schools as a fundamental part of the curriculum.

As decade followed decade through the 21st century, Aili’s concept, which she introduced in Paris, of “a network of sanctuaries around the world, each one containing a vitally important ecosystem, and each one the home to indigenous people whose culture is rooted in that ecosystem”, continued to flourish. Her “growing quilt of sanctuaries” was one of the great achievements of our Renaissance.

The young woman from the Arctic taught us that the only way we were going to survive . . . was by learning from Nature, and becoming Guardians of planet Earth.

Chapter Fifty-Seven

I would like to take a look at a sickness which I knew well, a sickness which afflicted young people especially, and a sickness which we successfully eradicated. That sickness was the Glorification of War.

When I fled from my father into the world of war game videos, I was doing something that was very normal for a young person to do. I went from a world in which I had no control—my father could appear at any moment to spit his scorn, his venom, at me—to a world in which *I* was in control, shooting my enemies, blowing up their tanks and helicopters, until multitudes lay dead on the battlefield.

My father, of course, had been killed countless times, on a daily basis.

Other young people, consciously or unconsciously, fled from a world over which they had no control . . . their boredom and failure in school, their fears about leaving home and finding a job, or—a major cause, I believe—their fears about the planet on which they lived.

The media was filled with bad news, bad news, bad news about the coming catastrophes triggered by climate change, the wars which never ended, the refugees who came to Europe seeking safety . . . and perhaps our jobs.

Rather than wait for droughts to scorch us with record heat summer after summer, or monster hurricanes to blow our homes to bits, we fled into a world where we could turn our fears into aggression, blasting our way toward a victory which proclaimed us as indestructible. Of course the world outside only got worse and worse, so we bought more and more war game videos, until I myself had a collection of over five hundred. We talked with our friends about our latest games, and about the much advertised, much hyped, new game that was soon coming, a blockbuster to beat all blockbusters.

My point is: this was so easy to do. There was an *industry* that wanted us to spend our money on this artificial world which became addictive, an industry with T-shirts and posters and its own brand of music. An industry that taught us to kill.

This industry had a symbiotic twin: violent war films, whether on a movie theater screen, a television screen, or a laptop screen. I could immediately spot the poster for an American film: a big, strong soldier, dressed in camouflage, with camouflage paint on his face, held a powerful military rifle. In the background was a sexy girl, a burning car, and a helicopter exploding in the sky. These posters appeared

again and again outside the movie theater in Ås, in the subway stations in Oslo, and even on the beautiful Oslo wharf with its cafés and playground and boardwalk, where people loved to gaze out at the fjord. Yes, there on a peaceful springtime day, when the cafés were setting their chairs out in the sunshine, were multiple posters on multiple kiosks advertising American heroes who were ready to blow up the world. I was Norwegian, and Norway was a member of NATO, so of course the glowering warrior on the poster was a Good Guy.

He was my role model. So that when the time came—when the “enemy” (read *Russia*), launched a nuclear missile at Washington—all of the members of NATO would rise up together and launch a massive counterattack. Pow!

These posters, these movies, these war games, were as normal as salmon and potatoes on a Norwegian dinner table, with plum fruit cake for dessert.

But after the Peace Referendum in September of 2021—after the summer of intense education on the subjects of war and peace—people looked at these posters with fresh eyes. We asked ourselves, Do we really need this *Old Shit*? This was . . . what was the word? Propaganda. War propaganda. Getting young people like *me* ready to salute and march off to the next catastrophe, while the Old Boys sat in their offices and tallied their profits.

Someone pointed out in a letter published in *Aftenposten* that Hitler had done exactly the same thing during the decade leading up to World War Two: he ordered films to be made which would rouse the hearts of good Teutonic patriots, so that when the day came—on September 1, 1939, when Poland invaded Germany (one of many Big Lies)—millions of young patriots were ready to march and to kill and to die.

Yes, after the Second Referendum, when over five billion people—very well-educated people—voted for Peace, we regarded the world with fresh eyes. We could spot the Old Shit immediately, and we got rid of it. The war game video industry collapsed. The war films industry collapsed. I think that probably the camouflage industry collapsed as well.

We looked for *new* role models, and we made new films. Syrian filmmakers, many of them young with hand-held cameras, made honest and inspiring documentaries about the rebuilding of Aleppo after years of barbaric war. Located at the junction of ancient trade routes, and honored in 1986 as a UNESCO World Heritage Site, Aleppo had been bombed until little was left but rubble . . . and the bodies of countless people buried in that rubble.

Syrian filmmakers showed the rebuilding of the old *souk*, or marketplace. The rebuilding of mosques which had been targeted by artillery. And the rebuilding of the University, which had been bombed by planes while students were in the classrooms. (Yes, Russian planes, Russian bombs, flown and fired by Syrian pilots.) The films showed the solar panels on rooftops throughout the rebuilt city, as well as the large solar arrays outside the city, nestled among olive and fruit trees. Modern Aleppo would be a model 21st century city, with both a past . . . and a future.

Palestinian filmmakers showed the rebuilding of Gaza, the gradual tearing down of the walls, and the creation of two modern states which, finally, recognized each other's right to exist, and to exist in Peace.

Filmmakers in Sudan, in the Congo, in Ethiopia, documented the end of decades of war, and the building of a modern Africa powered by the sun.

The people had voted for Peace, and anyone who wanted to start another civil war was immediately taken to court, sentenced to prison for at least a decade, and forgotten. No one had time for the Old Shit any more.

* * * * *

Over five billion voters clearly remembered the second statement of the Peace Referendum, to which most of them had voted, "I agree".

2. Nuclear weapons shall be reduced in number until, within this decade (by 2031), they are eliminated. Strict verification shall monitor the eradication of nuclear weapons, and shall prevent the manufacture of any new nuclear weapons or their components.

Agree _____, or Disagree _____.

After decades of negotiations and treaties, which had resulted in slow step-by-step progress, the people took over and accomplished what Washington and Moscow had failed to do. Once again, people were educated on a global scale . . . about the monster that lived in their midst. Voters elected new representatives to their Congresses and Parliaments, and they marched in huge demonstrations in cities around the world. The marches were well organized, always peaceful, and very effective.

As Anna would say, "And so it came to pass", that on December 15, 2026, only five years after the Peace Referendum, the leaders of the countries which

possessed nuclear weapons met in Stockholm and signed the historic document stating that the Nuclear Age had come to an end. Provisions for “strict verification” were described in detail. The full and permanent eradication of nuclear weapons would be a model of transparency.

Alva Myrdal, the Swedish diplomat who had worked for much of her life on disarmament issues, especially the elimination of nuclear weapons—her most powerful book had been **The Game of Disarmament**, published in 1976 at the height of the Cold War—was honored in Stockholm and around the world for her efforts to make this day in December of 2026, fifty years later, possible.

People in Stockholm, and people in cities and towns and villages on every continent around the world, wore a T-shirt with Alva’s picture: a kindly woman who looked like your very intelligent grandmother. Below the picture were three words in large clear letters, “Thank you, Alva.”

Chapter Fifty-Eight

Marius here, with an observation on fathers.

During those two magnificent decades, when we made huge strides in the transition from coal and oil to the sun and the wind—proving to ourselves that we *could* do it, and that we could *keep right on* doing it—I often wondered what it was that had held us back so long. Jimmy Carter had commissioned a group of scientists in 1979 to study this new thing called “climate change”, and yet it wasn’t until over forty years later that countries around the world, together, began the great effort—the *heroic* effort—to do what we should have done forty years ago.

Why did we wait so long?

Going back even further, why did we wait so long before we *finally* put an end to our barbaric wars? World War One was supposed to be “the war to end all wars”, but we kept right on fighting. World War Two should have been the ultimate and final nightmare, but we kept right on building more and more weapons, including nuclear weapons. And we fought countless utterly unnecessary wars all around the world—look at the total devastation in Syria—for three-quarters of a century.

In 2019, the year of Anna’s high school graduation, we were getting ready to send the oil vessels and military vessels and war planes and nukes into the Arctic . . . yes, we were well on our way toward the final suicidal madness.

Why? What kept us so helpless, so passive, so oblivious, so *stupid*, as we progressed, step by step, toward our own obvious doom?

And then . . . what happened to us, so that suddenly, we changed the course of human history and moved in an entirely new direction? A very *good* direction.

Suddenly, we believed in ourselves. Suddenly we wrenched our mad captain from the wheel of our storm-tossed ship, and we took hold of the wheel ourselves. We set a new course, *away* from the rocks that loomed ahead. We trimmed our sails and headed out on the seas of discovery.

While I pondered these questions, I thought more and more about my father. He had disappeared from my life, and from my thoughts, for years. The stronger I became—in my self-confidence—the less I wanted to dwell on that hideous part of my life.

It was during the summer of 2031—I was a twenty-three-year-old graduate student sailing on the Russian research vessel in the Arctic—that I began to think

about the Snake again. I could still remember, vividly, the day—I was about five years old—when I spilled some red paint on the patio stones behind the house. My father was mowing the lawn—and watching me, watching me—so he saw me spill the paint. He rushed over, *really* angry, and said in a low voice that my mother could not hear, “Every time I think that you’re finally growing up, you show me how *stupid* you still are.”

That was our father-son relationship in a nutshell, for years. Again and again, he would say quietly to me, “My son, the idiot.”

I never told my mother. I simply shrank into my puddle of shame.

Eventually, when I discovered war game videos, I disappeared into that dark world of aggression and violence.

When I became old enough to mow the lawn, my father hired me to do the job. Once, when I asked him for the fifty *kroner* which he had owed me for a week, he scowled at me, took a fifty-*kroner* bill from his wallet and said to me as he gave me the money, “Marius, when you make your first hundred thousand *kroner*, let me know.”

No, he never touched me. But I believe that as there is physical abuse, there is also mental abuse. His scorn and his anger left no bruises, but they destroyed my spirit. I reached the point where I had bought a bottle of sleeping pills. I knew how to do it. On a winter’s night, when my parents thought I was asleep in bed, I would sneak out the back door, cross the yard, walk about half a kilometer across a farm field—they could follow my tracks in the snow in the morning—to a woods, where I would take off my coat, then swallow the entire bottle of pills, using a bottle of water which I would have with me. Hidden in the woods, I would lie down in the snow and fall asleep. Hypothermia would take over. My body on a cold winter’s night would slowly cool . . . until, unconscious, I died.

And then . . . my mother saved me.

At the dinner table one evening, my father suddenly exploded with rage at my mother and Anna because of all their talk about “human rights”. What did she do? She announced that she was going to divorce him. Because of “mutual contempt”. And then she *did* it. She went to a lawyer, and together they got rid of the Snake. He moved out of the house, left the university, disappeared to Stavanger. We never heard from him again.

I wrote a long letter to my mother while I was on the Russian ship that summer, thanking her. Thanking her for standing up to him. Thanking her for finding me beside the train tracks. Thanking her for giving me a new life.

Finally, I could be a person, not a failure.

Because of my mother, and my grade school principal, Dr. Vilbjørg Sverdrup, I discovered Jacques Cousteau, clearly a substitute father.

I discovered Paris, and through Erling, the dream of one day visiting Tahiti.

Because I now had a *purpose*, I flourished in school. I finished middle school with good grades, and graduated from Ås high school as valedictorian, the number one student.

I enrolled at the University of Bergen as a major in marine biology, and soon augmented my courses with volunteer work at the Institute of Marine Research, where the professional scientists noted my enthusiasm. Upon graduating in the top ten percent of my university class, I pursued graduate work at the Bjerknes Centre for Climate Research at the University of Bergen, where, with a vibrant group of professors and fellow grad students, I rounded out my education focused on the oceans . . . with an education focused on global climate research.

My four years at the Bjerknes Centre enabled me to sail with Sergei on the Russian research vessel in the Arctic. And to study at the Université Pierre et Marie Curie, in Paris, which in turn . . . enabled me to spend a semester at the University of French Polynesia, on Tahiti. Where I snorkeled through the most gorgeous coral reefs in the world. And where, one day in the university library, a young woman walked up to me and asked if it was true that I was Norwegian. She said that she had always wanted to see the northern lights.

That was Meherio, which means in her Polynesian language, “Mermaid”.

I can’t remember if I checked out a book that day. But from that day forward, it was Marius and Meherio, inseparable. She took me snorkeling, and I, eventually, showed her the northern lights.

Meherio was a law student, specializing in “Environmental Law of the South Pacific”. Her islands had been the testing ground for French nuclear weapons during 1966 to 1996, when France detonated 193 nuclear devices which contaminated her people with massive radiation. “Pas encore!” she said. “Never again!”

The French had stopped their nuclear testing, but ocean trawlers from several countries were still sweeping the seas with their giant nets. And climate change—the

warming of the oceans, and ocean acidification—had begun its damage on her reefs. “Il y a beaucoup de travail à faire,” she told me. “There is a lot of work to do.”

Meherio gave me my first lessons in the Polynesian language. She introduced me to exquisite Polynesian food, to her magical island music . . . and to her traditional Polynesian dances. The women have their own dances, and the men have their own dances. Marius gave it his best; and though I could never equal the grace and subtle power of the Polynesian men, Meherio looked on with approval.

It was during my semester on Tahiti that I blossomed as a writer. Using my own photography to illustrate the articles—both underwater as well as on land—I began to write stories which, like the stories told by Jacques Cousteau, put the reader right on the deck of the research vessel, or in a dugout canoe, then led the reader on an underwater adventure through the crystalline waters of a South Pacific coral reef. I abandoned the stiff academic style which had always repulsed me; I used no scientific jargon, no footnotes and references in parentheses to previous research articles, all of which cluttered the page. I wove Meherio’s music into the story, took the reader on an island picnic, and tried my best to describe the spectacular clouds that drifted over the vast Pacific.

I sent these articles to my mother, and to Anna and Erling, back home in cold, gray Norway, so that they could share my adventures. It was Anna who collected them and shopped them around to publishers in Oslo, and thus enabled me to publish my first book.

The Snake, you see, was wrong. It was not *me* who was so stupid.

We never heard from him again. He was not invited to Anna’s triumphant graduation from law school, with a master’s degree in human rights.

He was not invited to my graduation with a doctorate in marine biology—my thesis compared cetaceans of the Arctic with cetaceans of the South Pacific—from the University of Bergen.

He was never notified of the birth of Anna and Erling’s first child, Helena, whom everyone called Little Sunshine.

He was never notified as, one after another, my books about the oceans of the world were published.

He was never notified as Anna won case after case defending human rights, cases for which she fought valiantly in the various courts of the world.

And he was certainly never notified when my mother, the heroine of my life, married an extraordinary Frenchman, Charles du Bonheur, one of my professors at the University in Paris. Charles had lost his wife after a long sickness. He was living—when I was his student, and gradually, his close friend—at “the dark, ragged edge”. I myself had lived at the dark, ragged edge, and knew that one step beyond that edge was the last step. I invited my mother to visit me in Paris, so that I could show her the University which I enjoyed so much. She arrived two weeks later, ready for the University and the museums and the Cathedral of Notre Dame . . . all of which we visited, in the splendid company of Charles.

No, the Snake was never informed about the wedding.

So I wonder, going back to my initial ponderings in this chapter, how much of human progress depends on . . . self-confidence. On believing in your own dreams, your own talents, your own abilities. And on breaking free from the Vile Creature which dominates your life.

Two historic referendums provided us first with an education, and then with the opportunity to speak. Once we had spoken, and discovered that over five billion people were in agreement with each other . . . we let nothing stop us as together we moved forward, with long bold strides, toward our own goals: a healthy world, and peace. Everything else would follow, once we had built the foundation.

During the first two magnificent decades, we built that foundation.

And then we kept right on going.

Good bye, Snake.

Hello World.

Part XII

Helena

Chapter Fifty-Nine

Anna is back. Thank you, Marius, for taking us from 2021 to 2040, the Two Magnificent Decades when the world harnessed the sun and the wind, who were very willing to go to work.

Actually, by 2040, we had reached about 77% clean energy globally, not yet 100%. But with our industrial momentum, we hoped be very close to 90% clean energy by 2060, when the last coal mine would be closed, and the last oil well would be capped. By eliminating the dirty fuels, and by allowing the forests to grow back, we hoped to reduce greenhouse gases by 95% in 2080. And by 2100, the end of the most heroic century in human history—and the most intelligent—we hoped to reach 100%. At that point, Mother Nature should be well on her way toward healing completely.

That would be our gift to life on planet Earth in the 22nd century.

During the Two Magnificent Decades, we did more than build a global network of clean energy. Equally important, we learned to work together. We learned to be willing *to learn* from each other. So that by 2040, we approached each project with a global perspective, taking into consideration everyone's viewpoint, and especially everyone's knowledge. We were a global team. This was truly a new way of thinking.

For example, the field of medicine had advanced enormously during the past two decades because health professionals in countries around the world now shared their knowledge, shared their technology, shared their research. Chinese doctors, Russian doctors, Swedish doctors, Brazilian doctors, Canadian doctors, Cuban doctors, American doctors: they all had so much to teach each other, just in the field of surgery alone. Like the high schools and colleges which wove together during the 2020s, medical schools had woven together as well, with exchange programs for both faculty and students.

And, the health profession reached out to indigenous peoples, who had their own wealth of knowledge, centuries old, based on natural medicines. Now that they and their thousands of species of plants were protected within the sanctuaries, native peoples and medical researchers could work together . . . as they did in Paris when Aili first brought them together.

Global problems required global solutions, and we learned, finally, to work together, to learn from each other, to share and to flourish. Erling, now an obstetrician specializing in critical care for newborns, did not spend his entire career working in one Oslo hospital, but instead visited, in the course of a decade, a dozen different hospitals in a dozen different countries, learning how his colleagues around the world keep their little ones alive. He was writing a medical text, to be published as an electronic book, which would share the techniques, and the wisdom, which he had gathered during his field work from Helsinki, Finland to Bombay, India.

This same global attitude had greatly enriched the full range of education, from kindergartens to graduate schools. People looked at other countries and asked, How do *they* teach their kids in *their* schools? What could we learn from *them*? Is there only one way to teach mathematics, or perhaps several different approaches? Why are some schools successful in teaching languages, whereas other schools drop language requirements out of the curriculum? What are the benefits of learning about music? How do different cultures handle discipline problems in the classroom?

Like the field of medicine, the field of education was an exciting place to be. Before, we learned from a teacher standing at the front of the classroom. Now we learned from a multitude of teachers, in a growing number of very different classrooms.

This new approach made life difficult for the Old Boys. As doctors and teachers reached out to each other, so did women. The high school girls who first met each other when the White Caps wove together high schools around the world, were now twenty years older, and their network was stronger than ever. They had gained certain freedoms, certain rights, especially the right for girls—all girls—to go to school. Now, no longer sixteen years old, but thirty-six, these women wanted *full* rights for their daughters. Certainly, no more child brides. Many of the dark practices which had haunted the lives of girls and young women were vehemently condemned, and prohibited by criminal law. Yes, the respect, and the legal protection, which were granted to girls and women were two of the major achievements of the Renaissance of the 21st century.

During those Two Magnificent Decades, a growing number of women ran for political office, and won. By 2040, these women, some of them now in their 40s, held positions of political power. They were joined by many young men who had once, years ago, held up a purple thumb. A tidal wave of international thinking washed

through the congresses and parliaments of the world, and eventually reached the highest offices, of president, of prime minister. Military budgets continued to dwindle, while health and education flourished.

Yes, as the two decades, 2020-2040, were the *launching* of the Renaissance, we looked forward to the next two decades, 2040-2060, as the *consolidation* of the Renaissance. Mature people with a global network would now be working together, through innovative schools, and through an enlightened legal system (it was here that I did my life's work), to be sure that humanity never, *never*, regressed back to the Bad Old Days of Poverty and Racism and War.

During the first two decades, the Launching, we built the foundation and the walls of our 21st century cathedral, walls well supported with flying buttresses. During the second two decades, the Consolidation, we would build the vaulted ceiling and the steeply pitched roof, keeping the rain out. We would build as well, during those years from 2040 to 2060, the stained-glass windows, and the organ, and we would write the music for the choir.

During the third Twin Decades, from 2060 to 2080, if all went well, we would build the two towers, with bells that would call out to pilgrims on their journey. And we would build the spire that reached up toward the heavens. This third period, the High Renaissance, one century after the worst years of the Cold War, would enable our greatest talents, our greatest visions, our greatest dreams . . . to live and to flourish. Never again would great talent perish during the Siege of Leningrad. Never again would great talent perish in the gas chambers of Auschwitz. Never again would great talent perish of napalm burns in Vietnam. Never again would great talent be buried in rubble during the barbaric bombing of Syria. Never again would great talent be squandered by the burning of the rainforest. Never again would great talent be squandered in the slums of crumbling cities.

As we harnessed the power of the sun and the wind, so we would protect, and nurture, *the best that is within us*.

Chapter Sixty

The Renaissance gave Erling and me two magnificent careers. The First and Second Referendums, in September of 2020 and 2021, transformed my law school classes from the traditional humdrum lectures to revolutionary discussions in which *everything* was examined with fresh eyes. I received my law degree in May of 2022 (and married my Erling in June), then continued for two more years at the Norwegian Center for Human Rights . . . while the defense of human rights was a major global issue. Our lecturers had often just arrived from the hot spots of the world.

The people had voted for Peace, and a permanent end to war. Thus, where wars still continued in various countries, we asked the probing questions: What were the human rights of the civilians trapped in the war zone? What were the human rights of the refugees? What were the human rights of the soldiers, on both sides? Of course, these questions had already been discussed, going back to the Charter of the United Nations, and even back to the legal restrictions on the poison gas of World War One. But we were entering a new age, with new ways of thinking, and thus human rights—and *all* the legal questions arising from war and peace—needed to be examined again.

This was not the Sixties in America, “Make Love, Not War”, which fell asleep in the Seventies, and died in the Eighties with Ronald Reagan. This was a time not for hippies, but for lawyers, and doctors, and teachers, and marine biologists, to become the architects of new legal systems, new medical systems, new and exciting approaches to education, and an entirely new relationship between people and the creatures with whom we shared planet Earth.

One major component of the Renaissance was the holding of a Referendum every five years, because the first two had worked so well. Thus in 2025, the peoples of the world voted on four statements related to the freedom, the equality, the dignity, and the future of women in the 21st century. The Referendum gave women their clear mandate, which they put to good use.

The Referendum in 2030 examined the progress we had made during the past decade. Were people satisfied with the surge of clean energy? Were they satisfied with the international classroom? Were they satisfied with the growing number of sanctuaries? Were they satisfied with the pace at which the last of the wars were terminated?

And so it went, in 2035, and in 2040. Two referendums each decade would provide an opportunity for the peoples of the world to spend the summer studying and discussing specific issues, and then the opportunity for them, in September, to speak. We all hope that this tradition—now formulated into law within the Charter of the United Nations—will continue to the end of the 21st century, and into the 22nd.

A lot of purple thumbs.

I myself became as much a teacher as a lawyer. My legal work encompassed the rights of refugees who had fled from the war in Syria. I shuttled back and forth between Oslo and the International Court of Justice, the principal judicial organ of the United Nations, in The Hague, Netherlands, where I was part of a team of experts examining war crimes and defending refugee rights. I also traveled to Syria itself, where the people were rebuilding their devastated country. I helped to set up a department of human rights at the University of Aleppo (which itself had been badly damaged). Not only law students, but students in every field at the University wanted to take a fundamental course in human rights, so that the nightmare which they had survived would never, *never*, happen again.

Erling, as I have mentioned, traveled to hospitals and medical schools in countries around the world, examining the various approaches to critical care for the newborn. Though he arrived as a researcher, gathering information for his book, he was often invited to give a seminar to the staff at a hospital, or to the students in a medical school. Thus he too became a teacher, a profession which he greatly enjoyed. As he had introduced the symphony orchestra to Marius on the evening of the fabled Tchaikovsky Violin Concerto, so he liked to share the information which he was gathering with other doctors, and with young students.

When his unprecedented book was finally ready, as an electronic book using his own photographs as illustrations, it became an international best seller. Erling's text was definitely a part of the Consolidation of the Renaissance, sharing the knowledge and the wisdom of many countries, many cultures.

* * * * *

Well, I must add that something else happened during those momentous years. Erling and I were married in June of 2022 at the Aas Church, our family church, which stood on the crest of a hill overlooking the University. (**Aas** is an earlier

spelling of Ås. Old black-and-white pictures of the Ås railroad station show the name on the building as Aas. This is one of the many particularities of the Norwegian language, which continue to confuse us to this day.)

In order to get beyond former family difficulties (caused by the Snake's attitude toward my mother's "rustic" parents in the north of Norway), I surprised my grandmother and grandfather when I phoned them two months before the date and very warmly invited them to their granddaughter's wedding. They were delighted.

Several days before the wedding, they flew down from Bodø to Oslo. When we met them at the airport, my mother and her parents were deeply happy to be reunited. Marius and I, watching them together, were jubilant.

We took them by train and Metro to the Holmenkollen Hotel, high on a hill overlooking Oslo and the fjord, and a short hike to the world famous ski jump. (There is no hotel in Ås, though everyone wonders why.) During the next week, my two rustic grandparents could travel by Metro and train directly to the train station at Ås (or Aas), where one of us always met them.

In the absence of anyone to walk me down the aisle, I invited my grandfather to walk with me toward the waiting groom. He and my grandmother had both brought their Steigen *bunads*, and thus a most distinguished gentleman, wearing a black jacket and knee breeches, a red vest, tall white socks and buckled shoes . . . and a black hat with a wide brim—a man proud of his mountains, a man proud of his sea, a man proud of his ancient people—walked me down the aisle toward the man with a huge smile who was waiting to take my hand.

My mother wore her blue Steigen *bunad*, a close replica of the *bunad* which her own mother wore (we took many pictures). I wore a new Steigen *bunad*, made especially for my wedding. Erling wore his Halden *bunad*, with a long white coat, a red-and-green vest, black knee breeches, tall white socks and buckled shoes . . . and a black hat with a brim not quite as wide.

When Erling in his white coat put the gold ring on the finger of Anna in her embroidered blue dress . . . that was a moment in history.

Erling and I, my mother and Marius . . . we all made the pilgrimage to Steigen that summer. We stayed with my grandparents at their home in Leines, where my mother slept in her old bed in her old bedroom, and where we had picnic dinners every evening in the back yard, at a table surrounded by white birches, their trunks

tinged red-orange by the sun low in the northwest. The air from the sea was cool and fresh, with a faint taste of brine. My mother couldn't stop smiling.

Of course, we visited the long curving beach at Brennvika, both during the day—some of them sunny, some of them misty, some of them drenched with rain—and during the late evenings—when the red-orange sun set over the sea swung further and further north, gliding lower and lower toward the horizon, and becoming deep crimson red. The sun at midnight hid behind a mountain to the north, but it lit the peaks of the jagged mountains that towered behind Brennvika beach, tingeing their black rock with radiant red. The mist from the white ribbons of waterfalls tumbling down the mountains was lit pale red as well.

The birds were up all night. The seagulls soared and circled above us, catching the red tint of the sun with the undersides of their long pointed wings.

Now and then we could spot tiny specks of black circling over the mountain peaks: the sea eagles rode on the wind that blew off the sea and then rushed up the sides of the mountains to the summits, where the eagles circled on the updraft.

The little sandpipers ran along the edge of the waves, peeping with their tiny sharp voices as they probed with their long beaks for a late night snack.

My favorites were the oystercatchers, or *kjeld* as we call them in Norwegian, birds almost as big as crows, with their black heads and backs, their white bellies, and especially, their orange legs and long orange beaks. The *kjeld* almost always fly in pairs, over the beach, over the sea, making an enormous amount of noise, because the *kjeld* are passionately in love. They proclaim their devotion with a loud “Kweeeeeeeep, kweeeeeeeeeeeeeeeep!”, letting the world know that *their* bride, and *their* groom, and *their* two eggs, and *their* newly hatched chicks . . . were the most beautiful in all of Steigen.

On one special evening, all of my mother's relatives, from the various farms and coastal villages and islands of Steigen, joined us on the beach for a family picnic. My grandmother's brother, a fiddler, introduced the City Folk from Oslo to the old tunes from the North. While the mountains peered down with curiosity, and the ocean-rolling waves roared and tumbled onto the beach, while the seagulls circled in search of offerings from the picnic, and while the *kjeld* blessed us all with their jubilant proclamations of love, of love! . . . the family danced on the beach to the tireless songs of the fiddle, our faces tinged radiant red by the sun swinging low over the sea.

I danced with every uncle and cousin, as we joyfully wove our family back together again.

Once, while we rested, I stood with my mother and grandmother, the three of us cupping our hands behind our ears as we faced upwards toward a distant waterfall dropping down a steep mountain slope. Without our cupped hands, we could not hear the faint roar of the water, but with our cupped hands, the roar was very distinct.

Then, following my grandmother's example, we turned around and cupped our hands toward the waves that rose up as they approached the beach—their backs gleaming red from the sun—and then crashed onto the sand with an enormous roar. Each wave sent a blanket of white foam, tinged red, racing up the sloping beach toward our bare feet. The water was cold! Cold! I shrieked because the water was so “Cold!”

It was on that evening that my grandmother told me, “Anna, after the good Lord had created the entire world and all of the beauty in it, He came back to this corner of the planet and created Norway. And when He was done creating the mountains and the lakes and the beaches and the islands of Norway—yes, when he had practiced and practiced and was truly a master—then the good Lord created Steigen.”

She paused.

“After Steigen, He rested.”

* * * * *

Well, something else happened in Steigen. It happened in a tent, two summers later, in July of 2024—a month after I had received my master's degree in human rights—on Brennvika beach, an hour or two after midnight, when the family had gone home in the early morning glow of the copper-orange sun . . . and the wife and the husband finally had a little time alone.

Not quite alone. The *kjeld* reminded us, sweeping noisily up and down the shore outside of our tent, that a bride and a groom had a job to do!

And so our Helena was conceived on that beach, while the waves roared and the tent flaps fluttered in the briny breeze, and the songs of the fiddle echoed in our minds.

Chapter Sixty-One

My name is Helena. I was born in April of 2025, which means that I was fifteen years old in 2040, when the world celebrated two decades of “unprecedented progress”.

My mother was a heroine.

My father was a hero.

My uncle was a hero.

My uncle’s wife was a heroine.

My grandmother was a heroine.

Aili Biriita Gaup was more than a heroine; she was a legend in her own time.

So what was *I* supposed to do?

* * * * *

When I was very young, my parents called me Little Sunshine. My grandmother gave me that name because I always smiled when she sang to me. Neither she nor I knew it at the time, but she was giving me a great gift.

When I was five, my mother gave me a different name. This is a very early memory, so I am not sure of all the details. We had just moved to our own house. Before, according to my mother, we had lived in an apartment close to “Daddy’s hospital”, but now we would live in our own house. On the first day that we lived there, my father wanted to take a picture of my mother and me standing in front of the new house.

But I refused, and stood with my back to the camera.

“Little Sunshine, what’s wrong?” asked my mother.

I pouted for a while, then finally I told her, “It’s gray.”

“What’s gray?”

“The *house* is gray.”

And it was, a drab gray.

“Well, what color would you like it to be?”

“*Red!* Like the red house on the calendar. With white around the windows.”

My parents had a calendar from Steigen. With a picture of a red house.

My father, holding his camera, was listening. He asked me, “Helena, do you want a red house?”

“Of course. What good is a house if it’s gray?”

“All right, then,” he said. “This is going to be our home, the happiest home in the world, and it shall be red.”

As my mother would say, “And so it came to pass,” that two men arrived with ladders and buckets of red paint, and they did a *beautiful* job.

Now when my father wanted to take a picture, I stood beside my mother in front of our red home, and together, we smiled. I still have that picture. My father was right. It was the happiest home in the world.

But from that day, my mother called me “Helena den Bestemte”, Helena the Determined. Helena who always got her way.

Because, I would add, Helena was usually right.

My mother and father traveled a lot. Especially my mother, who would disappear for a week or two on visits to different countries, where she “helped them to make good laws for the people.” When she was gone, sometimes my grandmother would come to stay with us, especially if my father had to be at the hospital all night.

We lived in a nice place, near a lake and a big forest. Our home was close to the Tåsen Metro stop, just four stops from the end of the line at Sognsvann. That’s why my mother and father bought this particular house. It was close to the lake and the forest. And if they took the Metro in the other direction, down the hill to Oslo, my father could go to the hospital and my mother could go to her law office. Or, the three of us could go to the big train station, then take the train for half an hour to visit my grandmother in Ås.

I loved the lake. We swam in the summer, and skied across the snowy ice in the winter. Sometimes in the early winter, the ice formed on cold nights without any snow, and then we could go skating. I was a good skater, an even better skier, but best of all I loved to swim in that beautiful lake.

My grandmother sang her songs to me, and of course I sang along with her. One day she announced to my parents, “Little Sunshine can *sing*!” It was true. I learned the melody—in a way, I *understood* the melody—very quickly. And I had no trouble remembering the words. My grandmother introduced me to Sissel, and soon I filled

my home with my own version of “Vestland, Vestland”, and “Alle hav består av dråper”, and a very dramatic rendition, in English, of “Going Home”.

It wasn’t just that I had a pretty voice, or an especially clear voice. Even at the young age of seven years old, my voice had a wide range, and I could hit a note, high or low, with absolute precision.

I discovered, as I listened to more and more of Sissel’s songs, that she was singing in many languages: not only in Norwegian and English, but also in French, Russian, German, Japanese, Latin, Irish, Icelandic, Faroese, Italian, Danish, Swedish, and Maori.

I asked my grandmother, “What is Maori?”

She told me, “The language of the indigenous people of New Zealand.”

“What are indigenous people?”

“The first people to live in a country. Like the Sami of Norway.”

“Oh.”

I have never met Sissel. But she was like my Fairy Godmother. She touched me with her magic wand, and showed me a path that I, in my own way, could follow.

When I was eight years old, I was looking through my mother’s old CD collection and found an album by Simon and Garfunkle (the names were vaguely familiar) called “Concert in Central Park”. The CD had a video of the concert, as well as the music. And so for the first time, while my mother was away on a trip and my father was in his office writing a report, I put on the headphones and stared at the screen as two Americans sang to a huge, huge crowd in a big park in New York City in September of 1981.

Paul Simon played a guitar. Art Garfunkle did not play a guitar; he sang, while Paul played and sang, and their band backed them up. Once, when Paul Simon left the stage and Art Garfunkle sang one song alone, “Bridge Over Troubled Water”, I fell in love for the first time in my young life.

But it was that guitar. My fingers were already reaching, wanting to hold a guitar, wanting to play those strings. I was only eight years old, but I *knew* . . . that I wanted a guitar and a microphone. And that I would sing my songs in many languages.

I listened to that concert over and over, focusing sometimes on the lyrics, sometimes on the instruments in the background, sometimes on the way that Simon

and Garfunkle sang together. I went back and listened to Sissel again (I discovered that she had sung her own rendition of “Bridge Over Troubled Water”), but this time I *studied* her concerts as much as I listened to them. I realized that her songs were sung in a certain order, one leading to the next. I listened more carefully to the instruments backing her up, and to the chorus that often sang with her. I listened to her duets with other singers, and realized that *I* wanted to sing duets with . . . well, I already sang with my grandmother, and that was a good start.

When my mother came back from her trip, and the three of us were together at the dinner table, I announced, “I need a guitar.”

My mother asked me, “Helena, you want to learn to play the guitar?”

I responded, “My fingers *need* a guitar.”

“Ah,” said my mother, “Helena den Bestemte. Our little girl keeps surprising us.”

My father said, “She’s been listening to Sissel. And Simon and Garfunkle. Next week she’ll be listening to Segovia.”

My mother said with surprise, “Simon and Garfunkle? Which album?”

“‘Concert in Central Park’. Paul Simon plays a guitar. And he wrote his own songs. I especially love the guitar in ‘Sounds of Silence.’”

“‘Concert in the Park’,” said my mother. “That’s one of my favorites.”

“You never play it.”

“Well, I’m so busy that . . .”

My father said, “I think we should find our Little Sunshine a guitar that she can grow into. And I think that we should find her a good teacher. Who can become an excellent teacher. Because somebody in the family already knows more about Sissel than you and I will ever understand.”

And so it came to pass, that my mother and father took me to a store in Oslo with musical instruments, where a man looked at my hands and asked my parents, “How old is she?”

“Eight,” said my mother.

“She has long fingers for an eight year old.”

I didn’t know: Was that good or bad?

He took a guitar down from the wall and handed it to me. I put the strap over my head, held the long neck with my left hand and . . . wanted to strum my first chord, but I didn’t know any chords yet.

“Can you recommend a good teacher?” asked my father.

“Can she sing?” asked the man.

“She’s got a very special voice,” said my father. “And when she listens to music, she *really* listens. I believe, I truly believe, that she has a talent which is waiting to blossom.”

“All right,” said the man, staring at me with an appraising look. “Do you mind an older gentleman? He’s retired. He’s a Norwegian from Lillehammer, but he spent most of his life in Barcelona. He says that the greatest joy in his life now . . . is nurturing new talent. If your little girl has the stuff, he can help her to build a foundation so that she can play any kind of music in the world. From Flamenco to jazz, Dominique has played it all on the stages of the world. I’ll write down his phone number. The rest up is to your little girl.”

“Helena,” said my mother. “Her name is Helena.”

Then the man did the most extraordinary thing. He dropped down on one knee, so that he was at my level.

“Helena, you’ve got to do two things. You’ve got to believe in yourself. And you’ve got to practice, practice, practice. Only if you *work*, are you going to be able to sing those songs in your heart.”

I looked at him. Helena den Bestemte. “Will you come to my first concert?”

“You bet I will. You just let me know when, and I’ll sit in the front row.”

Dominique Mendez, as he was known by his Spanish professional name, Ulf Nilsen, as he was known in Lillehammer before he left home, spent one hour with me in his studio at his home in Oslo, showing me various fingering positions for the left hand, various strumming positions for the right. I did the best I could with my small hands. If the fingers of the left hand were too far up or down the neck, the chord was flat or sharp; if the strumming was not crisp, the chord was muddled.

Then he asked me a question, “Do you hear the whole chord, or do you hear the individual notes in the chord?”

“Both,” I told him. “I have to hear each note, to be sure that they are all right *on* the note, neither sharp nor flat. And I have to hear the entire chord, to be sure that the notes fit together.”

“Hmmm,” he said.

Then he asked, “If I give you a book, and ask you to learn the five chords in the first chapter, can you do that by next week?”

“Of course. I’m in third grade, so we don’t have much homework.”

“Hmmm.”

He turned to my mother. “We’ll try once a week for two months. Then I’ll make my decision.”

“Thank you, Dominique,” said my mother. “Thank you.”

I asked him, “Will you play something for us? Will you show us how you play the chords? Some *Spanish* chords.”

Well, he seemed very pleased. He reached for his guitar, then he showed me his fingering on the neck, and showed me his strumming, as he played through a sequence of chords. And then he shifted into a distinctly different sound—a Spanish sound, as I guessed—so that I could not only see the fingerings, but I could hear the magic.

I smiled, my first smile that day. “Thank you, Mister Dominique. I am so glad to meet you.”

He smiled, his first smile since I had met him. “Helena, *el gusto es mio*.”

The pleasure is mine.

I did not disappoint my teacher. My fingers went through a period of extreme soreness, which Dominique said was normal. And then . . . by the third month, he would play through a sequence of chords, and I would try to replicate not only his fingering and his strumming, but his touch, his vibrato, his crescendo and decrescendo, and his subtle Flamenco flavorings, so that he was teaching me not only the music, but the magic as well.

Chapter Sixty-Two

Dominique and I became best friends.

It was if I was two people, of two different ages. One was a child who was in third grade, fourth grade, fifth grade, who spent the day with other children who painted messy pictures, and learned to read, and played on the playground (all of which I did as well). The other was an older but still young person whose hands were growing, who could read music before she could read a story, and who could *hear* extremely well.

When I was with Dominique, once a week in his studio, I was one person, exploring Spanish chords, French chords, early Renaissance chords from Italy. And when I was in school, my teacher put me on the stage, where I sang more and more of Sissel's songs, and Christmas songs at Christmas.

My mother and father took me to the Oslo Concert Hall once or twice a month, where we sat behind the orchestra in what my mother called "the best seats in the house", so that I could be close to the instruments, and I could watch the conductor because he was facing us. I was nine years old the first time I heard Beethoven's Third Symphony, and I can say that I did not just listen to it: I was *inside* it. I started crying; my father wrapped his arm around me.

I never understood why I could hear music the way I did. Or why I could *understand* it, how it was put together, how it shifted in key, in tone, in speed, and especially in its mood. My mother and father told me that I had a great talent, a gift. Dominique told me that I was "one of the chosen".

When I was twelve, in 2037, Loreen and Lamar came to visit us, with Lamar's little boy, two years old. Lamar's husband was working in Germany, though he phoned her every evening. My mother and my grandmother were always so deeply glad to see their friends from Syria, because they had met a long time ago.

The first evening that they were with us in our red home in Tåsen, Lamar sang a song in Arabic to her little boy, Nizar, who was named after his grandfather. She sang a lullaby, because he was falling asleep, very tired after his long trip from Germany.

The words in Arabic had sounds which I had never heard before. And the music did not follow any of the chords which I knew, although I could hear the flow of notes. I sat beside Lamar with my guitar and tried to accompany her. She gave me a big smile and kept singing.

After Nizar had fallen asleep, Lamar and I joined the others in the living room, where Lamar wrote the Arabic words in a notebook. Then I took the notebook, and as she said each word clearly, I wrote a transcription of the sounds in Norwegian. When I read what I had written back to her, she corrected me until my rendition was . . . well, she could understand what I was saying.

Then she sang the song, slowly, and I matched the words to the notes—strange, Arabic notes—so that eventually, I was singing with her. Now her mother joined us, and we became a trio singing an Arabic lullaby. My mother and father were watching us, marveling at what their daughter could do.

I practiced and practiced while Lamar and Nizar and Loreen were visiting us, until my voice brightened and strengthened . . . and I was singing, truly singing, in Arabic. That was the first time. I had no idea that I had an entire career ahead of me.

When I was sixteen, I entered Foss High School, on the eastern side of Oslo, because Foss had the strongest program in music (at the high school level) in the city. I loved that school from my very first day there. It was in a large, red-brick building which had once been a factory, built beside a stream—Akerselva—which a century ago had powered the machines in the many factories along its banks. Other schools were just modern boxes with windows, but Foss (the name means “waterfall”), bigger than the nearby church, had stature and beauty and dignity.

And I loved the *spirit* of the school. The students were full of energy, full of Big Plans, and I soon had a collection of close friends. The teachers did their best to guide us toward whatever our future profession might be. The rector, a strong, steady man, maintained the highest standards in everything that we did. We were all very proud to be a part of Foss School.

For the first time, I was with a large group of talented musicians. Although we all took the standard courses—biology and math and history and languages—we also took a course in the history of music, which included the development of the early symphony in Haydn’s time . . . to Beethoven’s thundering revolution in that Third Symphony which had so entranced me . . . to Tchaikovsky’s psychological Sixth Symphony, in which we can hear, in the final bars, the composer’s heartbeat.

I now had a multitude of friends with whom I could discuss all that we were learning. And I would share my new insights with Dominique, for we never stopped our weekly lessons. He of course would respond with insights of his own.

I auditioned for the school concert in November, and was invited to sing my Arabic lullaby as part of the program. During the rehearsals, I noticed a nice-looking boy watching me closely while I sang. When I had finished, he came up to me and asked, “May I film you sometime? I’ll be filming the entire concert, but I would like to make a short film of your song. I never heard anything like it.”

“Yes,” I said. I held out my hand. “My name is Helena.”

“Ørnulf,” he said as we shook hands.

He explained, “I’m not a musician. I want to be a studio engineer. And I’d really like to catch your voice, and your way of singing, in a short film.”

As my mother would say, my heart was beating like a Tchaikovsky tympani.

* * * * *

When I was eighteen—my birthday had been in April of 2043—my mother was going to speak in June at a human rights conference in Krakow, Poland. She invited my father and me to go with her, and . . . she asked me if maybe Ørnulf would like to come as well.

“This is going to be a special trip,” she told me. “I think that this will be something which you and Ørnulf should experience together.”

She would not say anything more than that.

The four of us flew from Oslo to Krakow, a city so old and beautiful that I wanted, as we walked through the marketplace, and stared up at the towers of the ancient church, to write a song about it. I had my guitar, of course. (I *always* had my guitar, no matter where I went. Ørnulf was never impatient with me when I needed to hide away for an hour to work on a new song.) But on that first day in Krakow, before the conference would begin on Monday, the four of us were walking, walking, walking, among the flower stalls in the marketplace, into Saint Mary’s Basilica, up the steps of the Town Hall Tower, along the Vistula River, and through a park filled with early summer flowers. At the Jagiellonian University—founded in 1364 and thus one of the oldest universities in the world, where Copernicus had been a student—we walked down a flight of stone steps that were deeply worn by the feet of multitudes of students over the many centuries.

So I had no time to write a song about Krakow. I thought that I might at least start a song that evening after dinner, but I fell asleep early in my bed, while my mother worked on her address to the conference at the desk in our room.

You see, my mother and I shared a room at the hotel, and my father and Ørnulf shared a room. The two guys got along well, so the arrangement was perfect.

Before I fell asleep, I heard clearly in my mind a trumpet fanfare which we had heard that day, several times, for it was played at the beginning of every hour from a window at the top of the taller of the two brick towers of St. Mary's Basilica, right on the market square. Everyone in the square would pause to look up at the bell of the trumpet peeking out the window. But then . . . after half a minute, the trumpet stops before the end of the fanfare. An abrupt stop. Why?

Reading his tour guide, Ørnulf informed us that during the 13th century, a guard up in the tower, looking out over the countryside, saw the dust of an approaching horde of soldiers. He played a warning fanfare with his trumpet, thus enabling the Polish archers to meet the Tartar attack and drive it back. After the city had been successfully defended, people climbed up the tower steps to find the guard and thank him . . . but he lay dead with a Tartar arrow through his throat.

Thus today, when the memorial fanfare is played once an hour, it abruptly stops.

I did not know it then, while I listened to that broken music in my mind, that it was the first hint of what I was to experience on this trip, about the savagery of war.

Ørnulf, my father and I sat together in the front row at the conference, listening to my mother deliver the opening Keynote Speech. This was the first time I had heard her speak outside of Oslo, and I was impressed. The delegates had come from countries around the world, for the conference addressed a global issue, "The Human Rights of the Refugees of Drought". And it seemed that the speaker they most wanted to hear, was my mother.

She began her hour-long talk by showing us, with a series of maps on a large screen, areas of drought caused by climate change, and the movements of refugees from those areas where they could no longer raise crops, or even find adequate water for daily life.

Millions of people in southern Asia were moving north, toward higher elevations where they could be closer to the rivers flowing down from the glaciers capping the mountains. There, in ever expanding refugee camps, the refugees could find the basic

necessities of survival. However, the glaciers in the Himalayas were melting, despite the brief stabilization of global temperatures during the years 2039 to 2041. The great rivers which had watered the Asian plains for thousands of years were carrying less and less water each year. And the rains had been unreliable for the past three decades.

“How much longer,” my mother asked the four hundred delegates, “can we house a growing number of refugees in these camps? What happens when we do not have enough water for irrigation, and agricultural production begins to decline? Will the previous residents not feel, perhaps rightfully, that they have first rights to food and water? Will they not demand that the refugees ‘go home’?”

She paused.

“What sort of conflicts will we be dealing with, when millions of refugees, facing starvation, are told that there is no more food for them? No more water for them. No more doctors, no more schools. Are we not witnessing the creation of an entirely new sort of war zone?”

Now my mother more than paused. I could see in her face that she was deeply shaken by what she was telling us. She had done the research . . . and she knew what was coming.

She continued, “For several decades, drought in Africa, as well as the wars in Iraq, Afghanistan, Syria, Yemen, Sudan, and Ethiopia, have sent refugees north toward any sanctuary they could find. Many of these refugees made their way to Europe. Now the wars have thankfully all but ended. However, the droughts—with record heat year after year, and little rain—are worsening. Drought refugees are pouring north, and the southern borders of Europe can no longer stop them.”

She showed us a map of northern Africa, the Middle East, and Europe, with arrows indicating the major movements of drought refugees.

“Temperatures are rising as well in Europe, and rainfall has diminished over the past two decades. In my home country, Norway, food production is now supported almost entirely by irrigation, rather than by the unpredictable rain. Temperatures rise steadily each winter, each summer, which means that snow falls as rain during the winter, and summers are so dry that the entire Scandinavian forest, reaching east into Russia, has been ravaged by forest fires. I am from Oslo, and I can tell you that regions of the forest which wraps around Oslo . . . are now charred black hills covered with burnt stumps.”

It was true: our beloved Nordmarka, with all its hiking trails in the summer and ski trails in the winter, had burned so frequently while I was growing up that the black

smoke (when the wind was from the north) drifting over our red house had become a part of normal life. Some of the students at Foss (including Ørnulf) had worked as volunteer firefighters, but when I had volunteered (one day when I was sixteen) to work behind the forward lines, I choked on the smoke until I almost passed out.

“Firefighting is not a profession for a singer,” said my father, so I stayed inside on the worst days, able to breathe, but filled with a growing dread that something very wrong was happening in my world.

“How many drought refugees,” asked my mother, “can Europe absorb? And for how long?”

She showed another map on the screen, of North America, with a large arrow moving from the southwestern states—Arizona, New Mexico, Southern California, Nevada, Utah, Colorado, Kansas, Oklahoma, and Texas—toward the Great Lakes along America’s northeastern border with Canada.

“Increasing numbers of Americans are migrating within their own country, from the drought-stricken Southwest toward the lakes, large and small, of Minnesota, Wisconsin, Michigan, Ohio, Pennsylvania, New York, and New England. These drought refugees try to call themselves ‘fellow Americans’, but in a number of regions, the resentment at their intrusion has grown violent. The American love for guns has turned some states into battlegrounds.”

She shook her head sadly. “No, we do not want that in Europe. We do not want that *anywhere* in the world. We have moved so steadily toward a world at peace, that we together must do everything possible to maintain that peace, despite our struggles with drought . . . and with all of the other changes in our world today caused by global warming.”

Now she showed on the screen a map of the Arctic, with the edge of the ice cap clearly delineated by a blue line.

“We see here the *maximum* extent of the Arctic ice cap, in March of this year, 2043, at the end of the winter, when the ice had reached its largest area and thickness. Once again, the winter ice cap had shrunk to a new record of both area and thinness.

“I am sorry to say, but despite our enormous efforts during the past three decades to replace coal and oil with the sun and the wind, the oceans of the world had already absorbed so much heat from our fossil fuel pollution that it will be a long time—we do not know how long—before they have cooled enough to stop the melting of the Arctic ice cap. The oceans are an enormous bank of heat, and that heat will be dissipated very slowly.”

Now she showed us another map of the Arctic, with the edge of the ice cap delineated by a blue line as it was last September, in 2042. “Here we see the *minimum* extent of the ice cap, at the end of last summer. Once again, the ice had shrunk to a new record of both area and thinness. The open water of the Arctic Ocean, an area which is thus larger and larger each year, absorbs the summertime sunshine more and more each year, and accordingly melts the ice from below . . . more and more each year. We knew about this process years ago, but we did not pay much attention back then. Now we know that the melting of the Arctic ice cap, and the warming of the Arctic Ocean, are a matter of life or death for planet Earth.”

She took us through the sequence which she had learned from Aili Biriita twenty-four years ago . . . almost a quarter of a century ago, when Aili had tried to warn the world with her film. (We had seen that film at Foss, where it was shown every year.)

With a series of illustrations on the screen, my mother told us, “The warming Arctic Ocean warms the winds that blow across the surface. The winds warm the land which surrounds the Arctic Ocean: northern Russia, Alaska, northern Canada, northern Scandinavia. As the land warms more and more each summer, the permafrost thaws, releasing increasing amounts of ancient carbon dioxide and methane. Way back in 2010, we saw pictures of flames shooting ten meters into the air . . . because people had cut a hole through the ice on a lake where methane was trapped beneath the ice. As the methane poured up through the hole, someone lit it with a cigarette lighter, and the flames roared up into the sky. Yes, we saw those pictures . . . then we turned the page to something more interesting.”

My mother clicked to an illustration of the atmosphere above the Arctic. “Something more. The warming Arctic Ocean warms the atmosphere above it. The jet streams which circle through the atmosphere at the top of the world are weakened, and thus they behave in ways that affect the weather, and the climate, further south in the Northern Hemisphere. The jet streams reach further south with pockets of Arctic air, bringing cold weather and snow to regions, such as Egypt, where snow had rarely been seen before. And the jet streams reach further north with pockets of warm southern air, bringing heat waves to the ‘temperate’ regions of the world.

“In addition, the movement of the jet streams around the top of the world slows down as they became warmer, so that the unusual weather which they are creating stays longer than usual: weeks without rain become months without rain, resulting in parched farms and dry rivers. Drought.”

Her voice became stern. “Thus the melting of the Arctic ice cap ultimately results in millions of drought refugees who are desperate, *desperate*, to find water and food . . . and a safe place to live. That is the unprecedented situation which we are examining here at this conference, at a time when 21% of the world’s energy is *still* produced from coal and oil.”

She thumped her fist on the podium. I jumped in my chair.

“The ice cap is melting, the glaciers are melting, the seas are rising, the droughts are worsening, and yet we are *still* burning coal and oil. When does this crime stop?”

She glared at us.

“That is a question which we must address at this conference.”

She slowly scanned the audience.

“Where will the drought refugees go? How long will they stay there? And what—very important—*human rights* do they have, as intruders in a foreign country? What human rights do they have if conflicts break out? What human rights do we all have—or not have—on this very unhealthy planet?”

I glanced at Ørnulf. He was staring at my mother, listening to every word.

“Well,” she said, her voice no longer stern, “I have brought you a lot of bad news. Now I hope that we together, during the next three days, can formulate some positive responses, so that we can solve this refugee crisis before it creates a series of catastrophes beyond our control.”

She smiled, her first smile of the day.

“I deeply believe that with the talent and the wisdom and the expertise gathered in this room, we can guide our world through the difficulties of the next decade.”

She bowed. “Thank you. Thank you.”

As she returned to her seat among the dignitaries at the front of the room, the audience applauded. Yes, they would do their best.

Ørnulf took hold of my hand and squeezed it. I looked at him.

“Thank you for bringing me along,” he said.

“It was my mother who suggested that we invite you.”

“I’m . . . honored.”

My mother, I now understood, had done more than invite Ørnulf to join us.

She had given us her blessing.

That evening, after the conference dinner in the hotel’s big dining hall, and after a walk, just the four of us, through the quiet marketplace of Krakow in the soft

shadows of evening—we heard the trumpeter at eight o'clock—I lay in my bed while my mother was downstairs having a drink with my father. I was thinking about what she had said.

I remembered Sognsvann last summer, when a forest fire had burned in the hills to the west of the lake. One arm of the fire had burned down the slope right to the northwest shore of the lake, leaving a swath of black in the otherwise green forest, as if an arm had reached down—the Black Arm of Death—and touched our beloved lake.

As a girl of fifteen, I had worried about our lake. As a girl of eighteen, who had attended the first day of the conference in Krakow, and who had heard every word that the Keynote Speaker had said . . . I was now worried about our world.

I was still awake when my mother came into the room. She did not turn on the light, but undressed and slipped into bed in the pale glow from the window.

I told her, “Thank you, Mom. You were great.”

“You’re welcome, Sweetheart. Now go to sleep. You’re great too.”

Chapter Sixty-Three

On the Thursday morning after the three-day conference, while my mother and father and Ørnulf and I ate breakfast in the hotel dining room, my mother announced that the four of us would spend the day visiting Auschwitz, sixty-six kilometers by train west of Krakow.

“Auschwitz was a concentration camp—a special kind of prison—during World War Two, a century ago. I think that we should take a close look at the reality of war. So that we never forget why we keep working so hard now, a century later.”

I had not expected this. Ørnulf and I had read about Auschwitz in a history class at Foss. But that was just pictures and a page of text in a book.

“Good idea, Anna,” said Ørnulf, always the diplomat.

Nothing, *nothing*, could have prepared me for what we saw that day. My mother was absolutely right to take us there, because for my generation, war was some horrible thing receding into the past. It was like a disease which had been eradicated; we all received a polio vaccine when we were children, then never thought about it anymore.

But as my mother had said at the conference, drought, and starvation, and migrations of millions of desperate people could create an entirely new kind of war.

Hard for a girl of eighteen, whose world was music and friends and Ørnulf, to understand that not only was the forest near Sognsvann burning, but that half a million desperate people might one day come pouring across our border because Norway had many such lakes filled with water, as well as waterfalls like white ribbons streaming down the mountainsides of Steigen.

We rode the train for about an hour and a half through small towns with brick houses, and farmland where the fields were green with the early growth of their crops. The day was sunny, not too hot: a perfect summer day in June.

We arrived in a town called, in Polish, Oświęcim, which the Germans, during their occupation of Poland during 1939 to 1945, had called Auschwitz. I wondered if Germany, during its occupation of Norway during 1940 to 1945, had changed any of the names of our towns.

From the railway station, we rode a bus for about ten minutes to what looked like a little town inside a wire fence, a fence with tall wooden watchtowers. Outside

the fence was a large parking lot nearly filled with cars and busses. I watched a group of school children walking together from their bus toward the entrance into the little town. I noticed that every child—they were about ten years old—was carrying flowers, mostly white and red carnations.

The four of us walked toward the entrance, which had a traffic boom that was raised up, two iron gates that were swung open, and a black, wrought-iron sign over the entrance, high enough that a truck could drive beneath it. The sign read, “**ARBEID MACHT FREI**”. My father translated for us, “Work makes freedom.”

Were the prisoners allowed to work until they could go free?

But I did not ask any questions. Maybe I would learn while we were on the tour.

We walked through the gate into the little town, which looked nice enough, with ordered streets of two-story brick buildings, and large trees in their full summer foliage, some maple, some white birch, very much like the trees at home.

I glanced sideways at the fence and saw that it was a double fence, with about two meters of gravel between the two barriers. The strands of wire were all barbed wire, attached to tall concrete posts that curved at the top toward the camp, where the barbed wire was especially thick. No one would ever be able to climb over those fences.

But something else. The outer posts had lamps on them, which would shine down at night on the space between the two fences. And . . . I could tell by the glass insulators where the wires were attached to the posts that the fence had been electrified.

My father pointed at a rusty sign, clearly from a century ago. He translated, “Caution! High tension! Deadly!”

Later during the day I learned that some of the prisoners, so exhausted, unable to endure any more, had grabbed hold of the fence in order to kill themselves.

I looked at Ørnulf. His face, usually so full of fun, was absolutely somber.

I looked at my mother. She said to me, “Be strong, Helena. Be strong.”

We walked into one of the red-brick buildings with a group of high school students, kids my age, who were speaking—as I guessed—Polish with very quiet voices. A girl ahead of me, who had just entered a room, cried out and turned back, her hand over her mouth and the most horrible look in her eyes. She made her way through the other students, who spoke softly to her, then she disappeared out the door into the sunshine.

Now the four of us entered the room . . . and saw life-size black-and-white photographs of prisoners in striped shirts and trousers. These life-size pictures were not on a wall, but stood in the room . . . like real people. Some of them stared right at us, with eyes that accused, with eyes that were utterly exhausted, with eyes that asked “Why?”

One prisoner, whom I shall never forget, hung from a chain attached to his wrists behind him, so that his arms were wrenched upward as they supported his weight. No one could possibly imagine how much pain he suffered. How long did he hang there?

I looked at my father, the doctor. He took hold of my hand and squeezed it.

We walked to another building, much larger, which had been a dormitory with wooden bunk beds three levels high. On the rough wooden walls we saw black-and-white photographs taken when hundreds of prisoners had lived here. Had died here. Skeletons with sunken eyes stared out at us from their beds—three or four men in one bed—while a German photographer had taken their picture. The Germans documented everything, even a death camp.

We walked into another building with three long rows of framed pictures along both sides of a corridor: hundreds of portraits of prisoners, with their names, prisoner numbers, dates, and background information. Their heads had been shaved. They stared at us from both sides of the long corridor as we walked and paused, and walked a little further and paused again, to read a name, to read, in Polish, “*Dentysta*”. Dentist. This man had been a dentist; he had fixed people’s teeth for a living. What was the crime in that?

Now, in another room, we stood in front of a wall covered with more pictures: three pictures of each person, like mug shots. Some of the prisoners were young. I will never forget the pictures of Czesława Kwoka, a fourteen-year-old Polish girl, Catholic, whose head had been shaved but her hair had started to grow back, who had sores on her lips, who wore a striped prisoner’s shirt, and who still had enough life in her eyes that, had she survived, she could have been one of my friends at Foss.

In one picture, she was wearing a scarf with Scottish plaid; she had turned her head partly to the right and her eyes were looking up . . . as if toward something in the distance, perhaps an angel who had come to rescue her.

Was she shot? Was she hung? Was she gassed? Did she starve to death? Did she die of typhus? Was she burned to ashes in the crematorium oven, or dumped into a mass grave?

My father pointed at the date below her picture: 1943. He said, “Exactly a century ago.” I could tell by his voice that he was close to tears.

A century ago, to a time of horrors. And a century from now? What sort of future would it be?

I was beginning to understand that my parents were saying, silently, to me and Ørnulf, “This must never, *never*, happen again.” Our generation had been born into a world at peace. Our job was to protect that peace. Forever.

We walked in the summer sunshine along the gravel road between the red-brick buildings of this little town where so many ghosts were screaming, then we entered a large warehouse called “Canada”. Once again we walked along a corridor, but here were large windows with black frames, through which we could see thousands of shoes in a long heap: shoes that had once belonged to people, before the prisoners undressed and walked, naked, into the gas chambers. The shoes were brown and dusty, although one pair of small shoes was still bright red.

We looked through windows at an enormous heap of human hair. What were the Germans going to do with it? I did not want to ask.

We looked at a huge heap of rusty spoons and forks, implements from kitchens across Europe, used somewhere in a crowded railroad car to eat a last potato.

We looked at a heap of eyeglasses, thousands of eyeglasses, through which people had witnessed their final moments.

We looked at battered suitcases, with people’s names written on their sides. What had they carried? A change of clothes. A few precious pictures. Bottles of pills—some important medicine—until the pills ran out.

Yes, and we looked at teeth, both dentures and real teeth, from which the Germans had removed the gold.

When we stepped back out into the sunshine, a century later, I said a prayer. I’m not much of a Sunday School girl, but I said a prayer, “Thank you, thank you, thank you, thank you, thank you that I am alive. That we are alive. Thank you, thank you.”

We peered into a tiny room where people had been packed, standing, until no one else would fit. One small vent let in air from outside, but not enough . . . to keep them from slowly using up the oxygen and suffocating.

One of the victims had been a pregnant woman.

This is where her child had died.

I told my mother, "I'm not sure I can take much more."

She looked at me—my mother looked at her child—and said, "We can't quit. We've got to see it all."

We stood in a prison cell with an open barred window which looked out into a courtyard. At one end of the courtyard was a black stone wall, where prisoners had stood before they were shot by a firing squad. The prisoners who were kept in this cell were waiting for their own turn to be shot. The guards wanted them to hear the shots of the executions just before their own.

Now we stood in that long courtyard, staring at the wall with countless little holes and dents and scratches where the bullets had hit it.

I haven't yet mentioned the flowers. All those children who brought their white and red carnations . . . They laid them on the bunks in the dormitories, on the floor beneath the man who hung from his arms chained behind him, on a shelf beneath the hundreds of portraits, on the black window frames in front of the spoons and the eyeglasses and the shoes. Almost everyone who came to Auschwitz brought flowers. We hadn't known, or we certainly would have done the same.

So there were flowers laid along the bottom of that open barred window. There were flowers at the bottom of the black wall. Red and white flowers. Like the red and white Polish flag.

Outside once again beneath the perfect blue sky, we looked at a wooden railroad car without windows, standing on a long track which led through a tunnel into the death camp. This railroad car . . . where had it come from? Who had ridden inside? Jews from Hungary? Jews from Germany? Gypsies from Romania? Soviet prisoners of war captured somewhere inside of Russia? Over a million people had died in this camp. Most of them had arrived in a railroad car without windows. Or water. Or toilets.

And then, yes, we actually approached a low concrete building with a tall square brick chimney. We stood in the gravel courtyard where so many had stood, waiting. Mothers holding the hands of their children. Old people, the men separated from the women after thirty, forty, fifty years of marriage. People who said their prayers in a dozen different languages.

And yes, we walked through the steel door into the gas chamber, a long, hideous room lit by ceiling light bulbs, with battered brick walls and a concrete floor . . . and no shower nozzles. Here, hundreds of people had been packed in, and then Zyklon B, a cyanide-based pesticide, was dropped through vents in the ceiling. In the darkness—the ultimate Hell—people screamed as they choked and died. After about twenty minutes, the screaming, which the guards could hear from outside, stopped.

Prisoners in a special work group called *sonderkommando* wore gas masks as they removed the bodies and carted them to the nearby crematorium, where the bodies were burned in ovens. Thus the chimney.

Prisoners were told when they arrived in those boxcars—told by the guards as a very cruel joke—that the only way out of Auschwitz was up through the chimneys.

I stared at the red and white carnations which people had laid in the ovens.

Maybe . . . I could write a song. My guitar was back at the hotel.

But could I possibly write a song about this?

Finally, toward the end of a day that had been a long battering eternity, the four of us stood outside in the gravel courtyard near the door to the gas chamber which we had visited . . . looking at the gallows where the Auschwitz camp commander, Rudolf Höss, had been hung after his trial in Warsaw, Poland.

Apart from one brief interval, Höss had been camp commander from May of 1940 (just after the German invasion of Norway) to January of 1945, when the Germans fled from the camp as the Soviet Army was advancing toward it. Höss had improved the camp's killing efficiency; it was he who introduced the use of Zyklon B, which enabled two thousand prisoners to be killed in various gas chambers in half an hour. It was not the killing, he later stated, but the burning of the bodies which took so much time.

Meanwhile, as the trains rolled in and the smoke rose up the chimney, Rudolf Höss lived in a comfortable two-story villa with his wife and five children. The fifth child, a daughter, Annegret Höss, was born at Auschwitz in November of 1943.

Auschwitz was liberated on the 27th of January, 1945, the last year of the war, by four divisions of the Soviet Army. The fleeing Germans had forced most of the prisoners still alive to march to another camp. Any prisoners too weak to march were shot on the road. Thus the Soviet Army found 7,500 prisoners still in the camp, and hundreds of corpses. Soviet photographers took pictures of emaciated prisoners standing in their striped outfits behind the barbed wire fences, staring out at their liberators.

The four of us stood in front of the gallows, a very simple structure: four wooden steps leading up to a small wooden platform, with a tall wooden rectangular frame standing above it. I stared at the steel hook projecting from the bottom of the crossbeam, still there a century later. Höss had stood on a stool, with a short rope between the hook and the noose around his neck. (We had seen the black-and-white picture of this moment, this tiny bit of justice after such monumental crimes.)

On April 16, 1947, after killing over a million people from a dozen countries in Europe, Rudolf Höss was the last person to die at Auschwitz.

We walked back out the gate, silent. We took the bus to the train station, took the train to Krakow. Walked to our hotel, from which most of the convention guests had departed.

It was when my mother and I were alone in our room—we would take a shower, first me, then her, before we went down to the dining room for dinner—that she looked at me, devastated, and began to sob. I took her in my arms, held her as tightly as I could. She wailed, so loud that my father and Ørnulf appeared in the room. I rocked her, gently, while we stood together, as she must have rocked me when I was a wailing infant. I of course was crying too. We let it all come pouring out.

After several minutes, she took a breath and nodded that she was all right. I let go of her. My father gave her a long hug. Ørnulf stood beside me, squeezing my hand.

When my mother looked at me—looked back and forth between me and Ørnulf—she said, “We can’t let it ever happen again. We’ve worked so hard, we’ve come so far . . .”

“I promise, Mom,” I said with a quiet voice. “I promise.”

“My too,” said Ørnulf. “You have my deepest promise, that no matter what I do as a job, my life’s work shall be peace.”

And that was all we needed to say.

We took our showers, and then we went downstairs and had a quiet, but somehow triumphant, dinner in Krakow, Poland.

Part XIII

Tipping Point

Chapter Sixty-Four

Aili speaking. Bures.

I sat on a reindeer hide spread over the tundra moss beside our campfire, drinking the first cup of morning coffee as I watched the sun glitter on the lake as a breeze played across the water.

My husband, Joavvna Máhtte—today was his forty-sixth birthday—was frying the trout which he had caught early this morning for his birthday breakfast.

My elder son, Áslak Heaika, sixteen years old, asked his father to lift the black frying pan from the iron grid over the flames, so that he could lay a few branches of juniper (which he had collected yesterday on a hike) on the birch-wood fire, giving the smoke that special scent from the mountains.

My young son, Duommá Issát, twelve years old, was slicing the potatoes which would follow the trout in the frying pan. He cut them with the knife which he himself had made, as his grandfather had taught him, with a reindeer horn handle.

My daughter, Káre Máre, fourteen years old, was walking slowly across the tundra near our camp, looking among the dwarf birch for early berries . . . and singing quietly with her young girl's voice.

We had been here together at our campsite for five days and zero nights, for there were no nights as the sun circled us in its golden ring over the world. Yellow at noon in the southern sky, deep red at midnight in the northern sky, the sun blessed our Arctic world with its mid-summer magic. The birds sang through the night, and so did Káre Máre, her young heart absolutely at peace.

Here on the *vidda*, far from town, all the nuisance and bother of daily life faded away, replaced by the many vibrant details which made life out here so exquisite: the vastness of the rolling tundra, the green and red moss beneath our bare feet, the sudden scurry of a little mouse, the cry of a hawk high above us. Our here, watching the sun as it swung on its tilted ring from half-way up the sky at noon to just above the horizon at midnight, we learned—once again—how to see, how to breathe, how to listen, and how to love. Yes, how to love, because our hearts opened up to embrace the tiny flowers, the distant mountains, and each other, in a way that could never happen where electronic screens barge into our lives with all the clamor of the world.

Yes, out here, where our people have lived for thousands of years, we can love the man who has a birthday today, without interruption, without any rush, letting him

know with quiet words, with kind words, with words rarely spoken in town—nor over the phone from Oslo or Geneva or New York or Moscow—how deeply we love him.

We will be at our campsite for two weeks, long enough, as I like to think, for the water from a mountain lake, which we drink in our coffee and slurp from our cupped hands, to become a major part of the blood flowing through our veins. Long enough for the oxygen in the air, which smells of sun-baked moss and fluttering birch leaves and the mist of approaching rain, to fill every breath and thus to nurture every thought, every dream, every song.

Sometimes, to mark the moment of midnight, the five of us stand together facing the sun blazing just above the rolling black hills to the north, our faces tinged red by the sun's crimson light. And then we sing together, old songs, ancient songs, so that those who came before us might hear . . . and be gladdened.

Yes, I drank my morning coffee—my lake water flavored with coffee kept in a reindeer hide pouch—and gazed at the man so intent on frying his trout, which would be his offering on this special day to the people who loved him.

We will go for a hike today, to the peak of a nearby mountain, not to reach the peak—as some would view the goal of their efforts—but to be up in the sky. To be in that upper wind, cool and fresh even on a hot afternoon in July.

When we come back to camp, sweaty from the hike, we'll swim in the lake . . . for less than a minute in water that half an hour ago was snow on a slope. We'll holler, we'll laugh, we'll splash each other.

And then we'll make another pot of coffee.

I noticed—the movement in the distance caught my eye—someone walking toward us, still half a kilometer away. It was my brother Mikkel Jovsset, who knew where we were camped, but who would never bother us unless it was for some serious reason.

I said quietly to Joavvna, as I pointed toward Mikkel, “My brother is coming.”

Joanvva, tending his trout so that they did not burn in the hot pan, glanced at me, looked toward Mikkel, then he smiled and said, “We have plenty of breakfast for him.” He returned his attention to flipping each trout over in the pan.

I stood up with my coffee and waved to Mikkel. He did not wave back. He was walking with a very steady, determined pace. Something was wrong. Was someone in the family sick?

I set down the coffee cup on a flat rock beside the fire, then began to walk, quickly, toward my brother. As station manager at Sami Radio, he kept our community informed of the activities of his little sister as she helped to establish yet another sanctuary somewhere in the world, or argued yet another case at The Hague. I could always rely on Mikkel to explain my activities, and to comment on my speeches, so that everyone, from teenagers to grandparents, could understand the nature of my work. And would hopefully approve.

We approached each other where the trail rounded the western end of the oval lake. Still he did not wave to me. Had someone in the family died? Our father had not been well lately, with an irregular heart, but still, he went on his daily walks . . .

Then Mikkel stopped, ten meters from me, near the small waves that were lapping the shore. He stared at me, devastated. As I approached him, he said with a broken voice, “Aili . . . Alexander Suvorov phoned me at the station. It has started all across northern Russia. After three hot summers . . . the permafrost has collapsed. Sasha received reports from a dozen colleagues. Some of them say they can even *hear* the gas rushing up out of the ground.”

I stood a few meters from my brother. I did not hug him. I did not welcome him to the birthday breakfast. I watched the tears running down this strong man’s cheeks.

Alexander Suvorov, and his father Pavel before him, had devoted their lives to the creation of an unprecedented research station on the tundra in northeast Siberia. If Sasha—who could tell simply by walking on the moss how solid the earth was beneath his feet—had phoned Mikkel to inform him that the permafrost had collapsed, then . . . this was the tipping point. This was the Big One.

“Aili, even here in Norway, we’ve been getting calls at the radio station from herders who say that the reindeer in some areas are panicking. They can smell the gas, they can smell the ancient rot. The herders are moving the herds out of the valleys to higher ground, where snow still covers the northern slopes. But . . .”

He stared at me, the little sister with all the answers. “Aili, is this the tipping point? You have been warning us for so many years that Methane is the Monster.”

Yes, since I spoke on the University stage in 2019. Twenty-four years ago. A quarter of a century. And I was certainly not the first to try to warn the world about the carbon gasses frozen in the tundra. Sergey Zimov, the pioneer scientist—the prophet who had spent his life on the tundra—had tried to tell the world that an entire Pleistocene biome, from vast plains of grass to the bodies of giant elks and mammoths,

had been buried beneath the ice thirty thousand years ago. Were the permafrost to thaw, and were bacteria today to feed on that feast, adding contemporary gasses to the trapped ancient gasses, the carbon released into the atmosphere would be far more than had been produced since the beginning of the Industrial Revolution.

And yet . . . the politicians dawdled. And stonewalled. And cut funding.

Even the two referendums were not enough to completely shut down Big Oil.

“Yes,” I said to my brother, who had four children a few years older than mine, “this is the tipping point.”

“Aili, . . .”

“Have you heard anything from Sweden yet? From Canada? From Alaska?”

“Nothing yet from Canada. Nothing from Alaska. We did receive a call from a herder in Sweden who reported that the ground is suddenly spongy.”

“Yes. Suddenly.”

“He said . . . some of our own herders in Norway said the same thing . . . that the birds are disappearing. The grouse on the *vidda*, and the seagulls along the rivers . . . they are gone. Almost overnight, they are gone.”

Yes, that would be the first climate migration. The birds can smell the stink of death, and they have fled. Now, somewhere, they are climate refugees.

And the reindeer are panicking. They have been here for ten thousand years, and now they want to run to . . . a nice, safe, tidy park in Oslo.

“Aili, . . .”

I could feel it coming now, the first huge black wave of grief.

Because this was the end of my Sami people.

This was the end of the magnificent reindeer.

This was the end of a family eating a peaceful breakfast together—a birthday breakfast of fresh trout—before they hiked up a mountain . . . and stood together in the sky.

This was the end for my three children, who would never live in a normal world.

Who might well decide not to have children of their own.

Who might well decide . . . especially my fragile daughter, who understood everything so well . . . that it would be better to die today, than to slowly die on a dying planet.

A huge black wave of grief wrapped over me. The pale blue sky where the sun traveled in its golden ring . . . had turned to the black of the darkest night.

I began to cry. I began to sob, as if Mikkel had just brought the news that our father had died.

“Aili, we need you. We need you to speak. Sami Radio, Sami television. Aili, your people need you.”

I shook my head, waved my hands in protest. What could I possibly say?

I heard my husband calling to me. Turning, I saw that Joavvna and our three children were walking toward Mikkel and me.

And then I remembered my grandmother’s face—with her quiet dignity, with her unrelenting strength—and I began to wail as if all the black grief in the world now filled my one small heart.

My husband and my two sons spoke with Mikkel, and so they learned what was happening in Russia.

But my daughter, Káre Máre, ran to her mother and hugged her, tried to comfort her, though she did not know yet what was wrong.

The mother held her child and shrieked with the deepest grief that she had ever known.

Chapter Sixty-Five

While Erling and I were eating breakfast at our home in Tåsen on that sunny Monday morning, July 13, 2043, we listened to the news on the radio, paying little attention, waiting really for the weather report—Would this week be as hot as the past week had been?—when we heard that NRK had received “unconfirmed reports” of “rapid permafrost degradation in northern Russia, Finland, Sweden, and Finnmark in Northern Norway”. Large quantities of gas, with a “rotten smell”, were rising into the atmosphere. Scientists in the various countries were rushing toward the “critical sites” to identify the gas, and to measure the quantities being released.

I looked at Erling, holding his coffee cup. He looked at me, with a piece of toast. I said quietly, “Oh, shit.”

NRK added, “Sami Radio in Kautokeino reports that according to Sami reindeer herders in Finnmark, some of their herds are moving away from areas where gas is being released. Several herds have reportedly crossed major highways. The police of Finnmark have been alerted of this situation.”

Other news followed: striking farmers in France. Erling turned off the radio.

We stared at each other. The first thing I felt was not fear, or anger, but a twinge of dread. The catastrophe which we had anticipated for so long . . . had just started. We had no idea how overwhelming it would become, nor how long it would dominate our lives. But we knew that it had started, and that nothing would ever be the same. As it worsened, we would live with shadow of dread every day for the rest of our lives.

Erling asked, “Should we phone Helena?”

She was in Lillehammer, working with Ørnulf at the hotel on Sjusjøen Lake. Ørnulf’s uncle was the manager at the hotel, so Helena and Ørnulf had gotten good summer jobs there. They had started the week after we returned from Poland; Helena worked in the dining room, and Ørnulf worked as a guide, taking tourists into the mountains.

Helena was enormously happy, exploring the mountains where Ørnulf had grown up. Sometimes she hiked with him (when they had time off together), and sometimes she hiked alone, with her guitar.

Dinners were over at eight o’clock. Helena’s shift finished at eight-thirty. Ørnulf’s uncle had hired her to give a concert every evening at nine, singing her own

songs for an hour . She was thrilled. She told us that she always finished the show with Lamar's Arabic lullaby.

Now . . . for how long would the world carry on as if nothing had happened?
And what would two eighteen-year-olds, deeply in love, think about their future?

Did Helena know yet? Would someone have a radio on in the kitchen while the crew was preparing breakfast for the guests?

"Let's wait," I said to Erling. "If she needs us, she'll phone. Breakfast at the hotel is over at nine-thirty. We can call her then, you from the hospital, me from my office." I paused, then I said again, "If she needs us, she'll phone."

We finished our breakfast in silence—each of us deep in our thoughts about the medical implications of a planetary surge of greenhouse gasses, and the human rights implications of a world thrown into chaos—then we walked together in the early morning sunshine to the Tåsen Metro stop, where some people were talking about the news, and others stood and stared.

I said to Erling, "I wish we could ride up the hill to Sognsvann. Take a swim. Pretend . . . that we're still back in the good old days."

"Maybe," he said, "we can take a swim this evening. Maybe the news will improve. Maybe it's not as bad as it sounds."

"Yes. Maybe. I'll try to phone Aili. She's on a camping trip with her family. I'm not sure I'll be able to reach her."

We stepped onto the train which we and our little girl had ridden so many hundreds of times while she was growing up. Everything felt unreal, as if we had become characters in a movie, a very bad movie.

* * * * *

Sofia Alexandra Jakobsen (me), sixty-five years old and preparing to retire in November, was just finishing her night shift in the premature infants' ward at the National Hospital. I had spent the night as I had done countless times, walking from incubator to incubator in the large room where my little angels were struggling to stay alive. I monitored their progress, noted a weakening of the heart, of the lungs, and quietly cheered them on as they added weight and flexed their little fingers.

When I walked toward the central desk to turn in my reports, Åse looked up from her laptop and asked me, “Have you heard about Russia?”

I shook my head, then asked, joking, “Did they win the World Cup?”

Åse’s eyes were filled with a strange sort of worry, or fear, which I had never seen before. We were all professionals at the hospital, and we went through crisis after crisis as part of our daily work. Clearly, something serious had happened.

She said, her voice low, as if she didn’t want the little ones in their incubators to hear, “It’s the tipping point that your friend Aili Biriita Gaup kept warning us about. Reports from the tundra in northern Russia—it was on the six o’clock news this morning—say that the permafrost is melting. Gasses from rotting animals from the Pleistocene Age, thirty thousand years ago—mastodons and musk oxen and lions that lived in the north of Russia—animals that had been frozen in the ice all those years, well now the ice is thawing, and I guess the stink is something awful. But . . . the worst of it is, is it the tipping point? What your friend Aili talked about? Because if it is,” Åse stared at me, “then Lord help us.”

My friend Aili, who had welcomed me to be one of the White Caps. Who had welcomed me to join the most wonderful group of people I had ever known. And who had warned us—who had warned the world, again and again—that as the big white cap of ice melted at the top of planet Earth, we were moving closer and closer to the day when . . . when we finally realized that today, that horrible catastrophe which we had refused to take seriously, had Just Started.

I needed to phone Anna. I glanced at the clock on the wall: five minutes to seven. Erling would start his shift at seven; Anna would arrive at her office at a quarter after seven. I could talk with Erling first, and then phone Anna.

“Åse,” I said with the professional voice which I used to reassure parents, “Let’s hope for the best.”

She smiled faintly. “Then I’ll see you at eleven o’clock tonight, same as ever. Don’t let this keep you from sleeping. Take a pill if you need to.”

“Thanks, I will.”

And then, instead of walking along the corridor to the stairs and the door that would take me outside to the morning sunshine, I went back into the large room with its humming machines and electronic charts attached to the rows of incubators where my little angels had no idea that we had just woken up the musk oxen and mammoths that had died thirty thousand years ago.

It was one thing when an underweight, partially developed infant gradually died, despite our best efforts. But it was something entirely different when—as I walked up and down the aisles, I touched my hand to the top of each plastic incubator—*all* of these children, enough to fill a classroom, had been born into a world which itself would soon need to be placed inside some giant incubator.

Erling appeared at the door in his hospital blues. He had his clipboard. I knew immediately from the look on his face that he not only knew the news, but knew the seriousness, the severity, of what was happening.

I asked him as he walked along an aisle toward me, “Why didn’t we know that hospital safety regulations needed to reach all the way to the Arctic ice cap?”

My son-in-law, this wonderful man who had made my Anna so happy, and who believed so deeply in the talents and vibrant spirit of their one and only child, looked down at a tiny infant girl with a small oxygen mask over her face. Perhaps his lips were trembling. Or perhaps he was saying something that I could not hear.

Perhaps he was asking her to forgive him.

Chapter Sixty-Six

Helena the Determined.

One month after I had stood in the gas chamber at Auschwitz, I heard the news in the hotel kitchen that a different kind of poison gas was pouring up from the Russian land into the sky. My hands were trembling as I set out the baskets of fresh bread on the dining room tables. I became deeply silent, very efficient at doing my job: straightening the chairs along the table sides before the breakfast guests arrived.

Ørnulf was guiding a group of Japanese tourists on a three-day camping trip in the mountains. He would be back this evening. Maybe we could go for a swim in the cold lake. He was the strong one. He was the steady, strong one.

He would be back at seven this evening, with his four campers, in time for dinner. His face would be suntanned, and he would walk in a completely different way from the way he walked in Oslo. He would enter the dining hall the way he walked in his mountains, with a purpose, with a destination, with unrelenting strength, and especially with a grace which I had never seen in the high school corridors. Yes, this summer I had discovered the *real* Ørnulf, born and raised in Lillehammer, the young man who had learned as a child to walk on a mountain trail. Every time he hefted a backpack onto his shoulders and felt its weight, he looked at me with his handsome, confident smile. He was ready. Tent, sleeping bag, rain gear, food, frying pan. He was ready.

But . . . maybe now, there would be no wedding. Maybe now there would be no children. Because, how could anyone think of bringing children into a world where they had no future? How could anyone sing a lullaby to a child when right outside the window, the trees were dying of drought?

And music? What was the point of music? Would I spend my short career singing at funerals?

No marriage, no wedding, no children. No more concerts. I felt cheated. Our entire generation had been cheated. Because, all the while that my mother had been working, and my father had been working, and my Uncle Marius had been working, and my Aunt Meherio had been working, and all the while that Aili Biriita and the White Caps had been working . . . someone else, someone hidden, had been working against them. Someone who didn't care about referendums. Someone who didn't

care about sanctuaries. Someone who didn't care about the sun and the wind. Someone who cared . . . about what? Money that ultimately could not buy anything. Power on a dying planet. A home with bodyguards that would fire on the mobs.

Why had those people been allowed to remain hidden? Shouldn't that have been Job Number One, back in early years of the 21st century? Before I was even born. Back when my mother had carried Lamar in her arms up the beach to my grandmother, a nurse, who listened with her stethoscope and heard a beating heart.

Why, *why* had those evil people been allowed to remain hidden? Why had such a *sickness* been allowed to exist all these years? Why were people so afraid to do Job Number One?

Well, maybe my own generation could do that. Maybe that's what it took to really have this dream called a Renaissance. Maybe a hundred people, or a thousand people, or a hundred thousand people as strong as Ørnulf could find those hidden monsters and drag them out into the light. Maybe the sickness from centuries of all the hideous things which people had done to each other does not go away so easily. Maybe the last and final Rudolph Höss has not yet been hung from the iron hook.

Yes, maybe that was the work of my generation. We were not going to die off overnight. Maybe this time, the White Caps, who, as Aili often said, were continually reinventing themselves and their mission, now had to shine some powerful lights into dark caves. Into dungeons. Into offices on the top floor.

And then maybe people like my mother, a human rights lawyer who had more than once been threatened by a phone call in the night, and my aunt, a Polynesian lawyer who had taken on the monsters in the whaling industry and who had *won* . . . and of course Aili Biriita, *Doctor* Aili Biriita Gaup, who had also been threatened by phone calls in the night, and yet who had created a growing patchwork of extremely successful sanctuaries around the world . . . Yes, maybe now such people could take those hidden monsters to court, in part to punish them, in part to show the world who they were and what crimes they had committed. And in part to remove them, as a surgeon would remove a cancer, so that a healthy humanity could continue building this cherished dream called a Renaissance.

So that we could live in peace in a healthy world. Could have a wedding and a family. Could sing songs at an evening concert. Could guide tourists into the wild mountains. Could reach 100% sunshine and wind by 2050.

As I checked the coffee machine—it was ready—my hands, I noticed, no longer trembled. Yes, I would phone my mother and father when breakfast was over, but I

would not be hysterical with fear. I would phone my grandmother in the evening, between serving dinner and getting ready for my concert, when she would be awake after sleeping all day, preparing for the night shift with her little angels.

And I would skype with my Uncle Marius and Aunt Meherio on the other side of the world, to tell them thank you. To tell them how much I missed them, and my three young cousins. And to tell them that Ørnulf and I were ready to fight—that, as I hoped, our entire generation would be ready to fight—for the whales and the turtles and the dolphins, and the coral reefs . . . who needed somebody to write a song about them.

Chapter Sixty-Seven

Marius with you now, just following a phone call at eleven o'clock at night here in Tahiti, from Aili Biriita at eleven o'clock in the morning in Kautokeino, Norway. The ringing of the phone, which woke me from a deep sleep, did not disturb me nearly as much as the news which she delivered.

Aili wanted to speak as well with Meherio, who had been awakened by the phone and who understood as she watched me from the bed that whoever was calling, it was something serious.

Now the two of us, "My Bride" as I still called her, and her "Viking", as she called me, stood on the terrace outside our bedroom, breathing the cool night air scented with frangipani. Our home was in the hills above Papeete, the capital of French Polynesia; when we looked down from our perch, even at eleven o'clock on a Sunday night, the lights of the small city were still bright, as were the lights stretching along the coast in both directions.

I poured us both a glass of *Beaujolais villages*, still my favorite red wine, available here in the South Pacific because our remote cluster of islands was a part of France. I poured the wine in order to remind us both that although the fools on the other side of the Equator had just bungled into yet another catastrophe, we still lived where nature and civilization genuinely flourished in a long-lasting symbiosis.

Nevertheless, when we clinked our glasses, I could see in Meherio's eyes, and she could see in mine, that we were both more than angry. We were outraged.

If it wasn't another war, it was another climate disaster. And of course they never cared, in their gilded offices where the last of the Thugs still sold their beloved oil on the world market, that all the Little People in their scattered, inconsequential countries were the ones who suffered in the end.

Meherio and I had three children, a daughter of five, a son of three, and a little girl not yet a year old. And tonight we learn that their world is about to be wrapped by additional blankets of carbon dioxide and methane—very *thick* blankets—so that the planet will warm at an accelerating rate for decades, and that it will store that extra heat, primarily in the oceans, for perhaps centuries.

The children were sleeping. We had sailed this morning on the family sloop from Papeete Harbor across the seventeen-kilometer stretch of sea to Mo'ore'a Island, where the offshore waters were a nursery for the visiting humpback whales. The

whales arrived from their feeding grounds in Antarctica in late June and early July, ready to give birth to their calves. We had several *atae* trees at the edge of our yard, which produced bright red-orange flowers at the beginning of July; thus islanders called the tree the whale tree, for it signals the arrive of our favorite guests.

The tourist boats pursue the whales, in a careful, professional manner. I prefer to anchor in a likely spot, and then to wait until, perhaps, a cluster of whales will pass not too far from the sloop. Today, we were blessed. It was almost as if they came over to say hello.

Our older daughter, Vairea, five years old, could remember the whales from last summer and was delighted to see her old friends again as they spouted. When a whale breached, rising high into the air and then landing with an enormous splash on its back, she clapped her hands and cheered with joy.

Our son, Anapa, three years old, may or may not have remembered the whales, but he laughed and looked at his mother with his big smile, which is why we often call him by his second name, Ataroa, Big Smile.

Our little one had never seen the whales (born in September, she was only ten months old). Tautiare stared at whatever it was that made the big splash . . . and shook her tiny fists.

We put a ladder over the side of the sloop, then Vairea and I, wearing our mask and snorkel, lowered ourselves quietly into the sea. We put on our flippers, then—with a wave to the crew on board—we paddled in the clear warm water toward a whale about fifty meters away. Oh, I was so glad when I spotted, in the hazy distance, a calf swimming close to its mother. I tapped Vairea's arm and pointed. Now she too saw the calf, and looked at me for a brief moment through her mask with excitement in her eyes.

Newborn calves—this one might be a week or two old—were six meters long. The mothers were about fourteen to sixteen meters long. To watch the two of them together, as the calf swam just above its mother and just below the rolling silver surface of the sea, was something that no human child will ever forget.

Humpbacks have unusually long pectoral flippers—their genus name is *Megaptera*, from the Greek, *Mega*, large, and *pteron*, wing—which they use for maneuvering with graceful dexterity, for slapping the surface . . . and for reaching out protectively toward a calf straying too far.

The great surprise (each time it happens) when you are snorkeling with your ears underwater near a cluster of humpbacks . . . occurs when suddenly you hear the

deep rumblings and raspings and assorted odd sounds: one of the whales has begun to sing. It is one thing to lower a microphone over the side of a boat; it is entirely different when you are right there with them, in *their* world, listening to the mysterious sounds which of course for the whales make perfect sense.

Once again, Vairea looked at me with excitement in her eyes. I made a few strange rumbling sounds through my snorkel. She splashed her hand at me and looked back at the mother with her calf.

Once we were back on the sloop (with tales of adventure!), it was Meherio's turn. She would take Anapa—his name in Polynesian meant “Sparkling Sea”—for his first snorkeling trip with the whales. He was only three, so they would not swim far, but she wanted him to at least see the mother and calf in the hazy distance. And perhaps to hear some rumblings that rippled right through you and made your eyes open wide.

Down the ladder they went, first Brave Mother and then Brave Son. They put on their flippers, gave us a short wave, then paddled slowly toward another Brave Mother and Brave Child.

Yes, they heard a whale singing, a long rumbling song that went on for a couple of minutes. And they saw, distinctly, the mother and her calf—the calf was now beneath its mother's white belly—swimming slowly in the silver-blue sea.

And yes, when they came up the ladder, son first, mother second, and boarded the sloop, Meherio looked at me with bright eyes and a smile which proclaimed that their first voyage had been a *triumph*!

We sailed for a few hours on the open sea, with a picnic of course, then we tacked back to Papeete Harbor on the island of Tahiti, where Vairea was very adept at helping her father to coil the lines and stow the sails.

We had dinner at one of the *roulottes*, an outdoor French café, then we drove home after a perfect day to our nest on the hillside, from which we could gaze at the misty green island in the distance, and at the vast blue-gray sea that stretched to the horizon . . . the sea which had been so welcoming today.

Following such a day, children sleep well. And parents, too, should sleep well. Unless a phone call awakens them in the middle of the night to tell them that we have just entered an epoch of madness.

Out on our terrace, Meherio said, “Aili is going to speak at midnight her time, at noon tomorrow our time.”

These were the first words that either Meherio or I had spoken since the phone call. I stared up at the stars, crystal clear in the tropical night.

“I know,” I said. “She wants me and she wants you to speak for four minutes each, so that the world can hear from two ‘experts’ in the Southern Hemisphere.”

Meherio nodded. “Is anyone at the television station in Papeete at this hour? Or should we call them in the morning?”

“In the morning. They can link us very quickly with Kautokeino, and Paris.”

We were quiet for a long moment. Meherio and I were often quiet for a long moment. Looking up at the stars, or out to sea.

“What are you going to say in your four minutes?” she asked.

“What are *you* going to say?” I replied.

Again a long moment of silence, while we breathed the scent of frangipani and heard the trees rustle in the mountain breeze.

“I will tell them that a little girl, not yet quite one year old, would like her turn to listen to the singing whales. And to watch a newborn calf swimming in a sea which will welcome newborn calves for the next thousand years.”

I took a deep breath of frangipani, then I told her, “I love you, Meherio.”

She brushed my cheek with her fingers. “I love you, Marius.”

A pause. While three children and a newborn calf were sleeping.

“Now,” she said, “Let’s go to sleep so that we are ready for tomorrow.”

Tomorrow. Yes, despite the madness, there was still a tomorrow.

Chapter Sixty-Eight

Anna speaking, as the morning sun circles toward midnight.

Aili phoned me this morning from her office at the university in Kautokeino. She asked me if I had heard the news. I told her that I had, and then, because we had been a team for twenty-five years, I asked her, “What’s our strategy?”

“I will speak this evening, beginning at 23:00. I will be outside on the tundra near Kautokeino, with a blazing red sun low to the horizon behind me, swinging toward due north at midnight. I will speak, and I will also interview a number of people, so that we can view this permafrost crisis from range of viewpoints. With your permission, I would like to ask Helena to sing one song, for all the world to hear.”

Oh! Bless you, Aili.

“Of course. She’ll be delighted.”

“Anna, we will need global transmission, and we’ve got to set it up quickly. Can you contact whatever few White Caps are working at headquarters in July, and ask them to alert all of our White Caps over the past twenty-four years? We’ve got to alert all of our networks, and they’ve got to alert *their* networks. The show starts tonight at 23:00 Central European Time. I want at least a billion people around the world to watch the midnight sun reach due north at 24:00, so that they thus see *a new day* beginning at the top of the world. From Monday, July 13 to Tuesday, July 14, Bastille Day in France.”

She paused.

I waited. I said nothing. My job with Aili was to listen, until she asked for my thoughts.

“I will then try to summarize, as the final speaker. I think that we can be done by 00:15. I’ve got a great crew from Oddasat, Sami Television, who will be out on the tundra with me with two cameras, a spotlight on me, and their best sound system. They will post a small unobtrusive clock in the lower left part of the screen.

“Midnight in Norway will be one o’clock in the morning in Arkhangelsk, Saint Petersburg and Moscow. I will interview a Russian scientist, so I hope to get a good Russian audience.

“Midnight in Norway is six o’clock on Monday evening in New York. Three in the afternoon in San Francisco. And noon in Tahiti. Marius will be speaking. Meherio will be speaking. Helena will sing. And you, Anna, you and your White Caps will have four minutes to address the world. I am assigning no subjects. What you would like to say is up to you.”

She paused.

My heart thumping, I said, “Ollu giitu.”

“I have already talked with NRK in Oslo. They have agreed to send a crew to whatever location you choose. You can tape during the day, with daylight, or you can join me live. Either way, you have four minutes.”

I managed to say, “All right.”

“With your permission, I need Helena’s phone number. Where is she now?”

“She’s in Lillehammer, working with Ørnulf at a hotel. Aili, it’s 9208 1095. Ørnulf can arrange for a television crew, I’m sure. As for Helena . . . she’ll be thrilled.”

“Good. Anna, during your four minutes . . . This is a moment in history, and we’ve got to be strong. Do you remember when you carried that unconscious little girl from her rubber boat up the beach to a nurse, who confirmed that her heart was still beating? That’s where we are. Be strong, Anna. Be strong.”

“Ollu giitu, Aili.”

“All right. See you at one hour before midnight.”

“Aili . . . thank you for twenty-five great years.”

“You’re welcome. Now let’s see if we can manage another twenty-five. We’ve got a bunch of kids who are counting on us.”

“Yes.”

“Mana dearvan.”

“Báze dearvan.”

And then she was gone. Until she reappeared on the Arctic tundra, one hour before midnight.

* * * * *

I contacted the twelve White Caps working that day at headquarters. July is vacation month in Norway, so most people were at their mountain cabins or on a beach beside the sea. But the news had shocked the nation and White Caps were already phoning headquarters, asking how they could help.

Before I had phoned Helena, she phoned me, about both the bad news and the *good* news: that Aili had just phoned her and asked her to sing . . . so that the end of her song brought the clock to exactly midnight.

“Mom, Aili wants a new song. I have to write it between my shifts in the dining room. Can you imagine, tonight I sing to the whole world and I haven’t even written the song yet!”

Yes, that was a heavy load for an eighteen-year-old.

“Sweetheart, make it simple and clear. We will no doubt translate it and put it on the White Caps website, so make it simple and clear. And positive. Positive and strong. Take your guitar for a walk after your lunch shift and let the mountains help

you. Think of the sun and the wind. Think of telling people around the world that . . . that this isn't the end."

"All right."

I could hear over the phone that she was taking deep breaths, trying to calm herself.

"Is Ørnulf with you?"

"He's out guiding. He won't be back until dinner."

"Can you phone him?"

"Not unless it's an emergency."

"Helena, this is an emergency. Ask his Uncle Isaak to phone him. And maybe Uncle Isaak could phone NRK to ask if they have a television crew anywhere near Lillehammer. Maybe there's a sporting event nearby. *Somebody* has to film you, with world-class sound equipment, while you sing your song."

"All right. I'll ask Uncle Isaak. It's not Ørnulf's fault, but I wish, wish, *wish* that he were here now."

"Of course, Sweetheart. Talk with Uncle Isaak. Call me back if you need me."

"All right."

"I love you, Angel."

"I love you too, Mom."

And then she was gone. Until her vibrant, crystal-clear voice reached out to the world at five minutes to midnight, asking a billion listeners to be strong.

To be strong.

Chapter Sixty-Nine

During Monday, July 13, 2043, people around the world learned about the sudden thawing of the permafrost in the Arctic, and the consequent release of unknown quantities of two greenhouse gasses, carbon dioxide and methane. People learned that the thawing was the long-expected result of the gradual warming of the planet. They also learned that the two greenhouse gasses would travel on atmospheric winds around the planet, wrapping it in an even thicker blanket, and would thus accelerate the warming of the planet. This “tipping point”, as it was called in many languages, could have “serious and long-lasting consequences”.

After twenty-four years of listening to a voice which they trusted, the voice of a woman who had been born on the tundra, who had a law degree, who had a doctoral degree in human rights, who had founded the Sanctuaries program, and who spoke to them with absolute honesty in a language (perhaps translated) which they could all understand . . . they were absolutely determined, no matter what time zone they lived in, to listen to Dr. Aili Biriita Gaup when she addressed them at 23:00 Central European Time on Monday evening. Never mind the news commentators. Never mind the politicians. When Aili spoke in her blue Sami dress with red cuffs and red hem, people knew that they could trust her.

She would not only speak, but would also interview experts from Russia, from Norway, and from Tahiti in the South Pacific. 23:00 on Monday night in Norway was 09:00 on Tuesday morning in Kamchatka. The Russians would be listening.

23:00 on Monday night in Norway would be 17:00 on Monday afternoon in New York, 16:00 in Chicago, 15:00 in Colorado, and 14:00, early afternoon, in San Francisco. The Americans would be listening.

23:00 on Monday night in Norway would be 11:00 on Monday morning in Hawaii. Even if the surf was up, they would be listening.

Despite the short amount of preparation time, Aili’s words—though not the words of those whom she interviewed—would be available in translation in twenty-seven languages on the White Caps website when Aili Biriita spoke to the world. Translations of the various experts would be available within a day or two.

People who had been teenagers when they first heard Aili speak in her film, back in 2019, were now parents with children who were teenagers. Aili had never held a political office, and had never earned a penny from the network of sanctuaries which steadily grew around the world. She had a husband and three young children.

Aili Biriita was as honorable and reliable as your grandmother, although she was only forty-six.

* * * * *

“Bures,” she said, in her blue and red dress, on a billion—perhaps two billion—television screens and laptop screens and telephone screens, and on giant screens which had been set up in key locations in major cities around the world. Behind her, a short distance from her right shoulder, the deep red sun lit the rolling tundra with a golden-red glow. Most of the viewers had never before seen the midnight sun in the Arctic. In exactly one hour, they would see it, live, as they looked directly toward the North Pole.

Over the twenty-four years (since the film in 2019), people around the world had watched her face as it had changed from the face of a beautiful young woman to the face of a weathered middle-aged woman. But her eyes never changed. And her voice never changed. Her voice could reach to the back row of a large auditorium, grab you by the shoulders and *shake* you.

Although Aili held a microphone in her hand, she looked into the camera as if she were speaking to us over a kitchen table.

“I am not sure what is greater today, my outrage . . . or my grief.”

Yes, we too felt both outrage . . . and grief.

“I am not sure what is greater today, my despair . . . or my determination.”

Always, *always*, she spoke from the heart.

“We have heated our planet by burning first coal, and then both coal and oil, since the beginning of the Industrial Revolution, back in 1750, almost three centuries ago. We *knew* that we were heating our planet, and we *knew* that there could be dangerous consequences. We have tried our best, especially during the past two decades of extraordinary progress in the field of clean energy, to make the transition from reliance on coal and oil to reliance on the sun and the wind. But . . . we never fully stopped burning the coal, and we never fully stopped burning the oil. We cut back, but we never fully stopped feeding the fire. So of course, smoke from the fire rose into the air, and continued to wrap its black blanket around our planet. We never gave Mother Earth the breath of clean air that she so desperately needed.”

Aili repeated sternly, “We never gave Mother Earth the breath of clean air that she so desperately needed.”

Then she paused.

“During the Pleistocene Epoch, which lasted from roughly 2,588,000 years ago to 11,700 years ago—in other words from two and a half million years ago to very close to our present time—glaciers repeatedly reached down from the top of the world toward the lower latitudes. Then they would retreat, melting at their southern edges, enabling plants and animals to live once more in northern Europe, in northern Asia, and in northern North America. Previous to the last glacial period, northern Russia—what we now call Siberia—was covered with vast grasslands. Roaming these prairies were very large mammals. Scientists today call them ‘megafauna’. You have seen their pictures in your school books: woolly mammoths with their enormous curving tusks, saber-toothed cats, giant Irish elk, cave bears, bison much larger than our contemporary buffalo, the woolly rhinoceros, aurochs (a large ancestor of our cattle today), and the cave hyena.”

Aili paused, then she told us, “Right here where I stand today, those giant mammals once roamed the rolling grasslands. Perhaps, while I speak, a woolly mammoth might walk up behind me so that she could stare with curiosity into the camera.” Aili glanced over her shoulder . . . but we saw no approaching woolly mammoth.

“At some point thousands of years ago—I cannot give you an exact date—the final glacier of the Pleistocene Epoch reached down and covered large areas of northern Europe and Asia. The plants and some of the animals which had been living there now died in the increasing cold. Perhaps the mammoths and bison and elk weakened and died because of starvation. They did not make it through the winter, and their bodies lay on the cold ground. During the warmer summers, their bodies began to decompose because of bacteria feeding on them. Bacteria back then, as they do today, released carbon dioxide and methane as byproducts of their metabolic processes.

“This grim landscape of dead plants and animals was covered first by snow, and then by the thickening ice of the glaciers. The ground itself froze, in some places to over a kilometer deep.

“And then, not so long ago, the glaciers retreated once again, leaving a barren terrain, but leaving also the frozen ground which *remained* frozen. And that frozen ground—a vestige of the last ice age—contained the ancient plant and animal life which had once flourished upon the land. For nearly twelve thousand years, this

organic matter has been frozen in the permanently frozen ground . . . which we call permafrost.”

She paused.

“But now, as our planet warms, the Arctic ice cap melts at an accelerating rate, the Arctic Ocean warms at an accelerating rate, and the winds blowing over the ocean become warmer. These warming winds blow all summer over the surrounding land, warming it . . . and thus the permafrost begins to thaw.

“The ice on a lake may be thick and strong through the winter, but when the sunshine of spring brings that wonderful warmth which we all know and love, the ice on a lake quickly becomes rotten . . . and within a few days, it disappears. In the same way, when the permafrost reaches a critical temperature, it does not slowly melt, drop by drop. Instead, it becomes a mix of rotten ice and earth.

“And then, all of the gasses from bacterial decomposition which have been trapped beneath it for thousands of years . . . can easily seep up to the surface. Bacteria today can make their way down into the soil, and restart the decomposition process, so that a mix of ancient gasses and contemporary gasses now rise up into the atmosphere. As any gardener who has a mulch pile can tell you, just reach your hand into a mound of rotting grass—grass from mowing your lawn, for example—and you will feel the heat of bacterial decomposition. So the bacteria feeding today on ancient organic matter even *add* their own heat to the process.

“This is the tipping point, when an unprecedented process begins, and even accelerates, completely beyond our control. The carbon dioxide and methane, both old and new, rise up in growing quantities into the atmosphere. Because they are both greenhouse gasses, they form an ever thickening blanket around our planet, thus warming the planet. As the planet warms, more and more of the permafrost thaws, releasing more and more gas. This positive feedback, once it begins, cannot be stopped by little people like us. And that is where we are today.”

Pausing, Aili looked over her right shoulder at the blazing red sun, which was moving incrementally to the right across the screens which billions of people were watching.

Then she looked at us again. “Methane is a minor component of the gas which is released from the permafrost. Most of the gas is carbon dioxide. *But* . . . during the first twenty years of methane’s circulation in the atmosphere, it holds in 84 times as much heat as carbon dioxide. (That figure varies, according to various sources, but 84 seems to be the most accepted figure among scientists.) Methane remains in the

atmosphere for a decade or two, whereas carbon dioxide can remain for many decades, perhaps centuries. Thus it is the methane which most endangers our future during the next twenty years.”

Aili glared at us, as a stern teacher glares at her derelict students. “As I said twenty-four years ago on the stage of an auditorium at the University of Oslo, ‘Methane is the Monster’.”

Yes, she had tried to warn us, long ago.

“I will add that both carbon dioxide and methane are colorless, odorless gasses. The initial stench where they first rise up from the degraded permafrost comes from other gasses mixed in with them, from rotting organic material. Once the carbon dioxide and methane drift away from the tundra to other locations around the world, we will not smell them. Thus the Monster is both colorless and odorless. But it will be in every breath that you breathe.”

Aili now did something which over the years had become her trademark. She breathed with deep, strong breaths over the microphone, pursing her lips to make a small wind. Each one of us had our own interpretation of what she meant by this.

Now she gave us a picture, so that we could understand, very clearly, where we were right now. “We have reached, and passed, a major tipping point, and others will now follow at an accelerating rate.

“We have rocked the canoe back and forth, back and forth, until suddenly—and very quickly—the canoe tips over and we are in the water. Perhaps very cold water. Everything that was in the canoe is now sinking to the bottom.

“The canoe is upside-down. We roll it over, but it is full of water. How do we get the water out? How do we get back into the canoe? Where is the paddle?

“And how long are we going to survive in this cold water?”

Thank you, Aili, for the brutal truth.

She stared at us, her eyes probing deep, and then she asked her questions.

“How much carbon dioxide and methane are trapped in and beneath the permafrost? We do not know.

“How much carbon dioxide and methane will be released . . . over the years, over the decades? We do not know.

“Will the coming winter freeze the permafrost and stop the leakage? We do not know.

“What will happen next spring? What will happen next summer? We do not know.

“With this new blanket of pollution, how much warmer will the planet become? We do not know.

“How much more heat will the oceans absorb? We do not know.

“With the increasing amounts of carbon dioxide, how much more acidic will the oceans become? We do not know.

“How long before the Arctic ice cap disappears? How long before the Arctic is no longer the Arctic?”

She paused.

“We do not know.

“Can we stop this nightmare?

“Or have we waited too long?”

That final question was like a knife in our hearts. Had we waited too long?

“I think that I will pause at this point, so that a number of my colleagues can share their thoughts with you.”

Aili glanced toward her crew, then she said into the microphone, “Alexander Suvorov, a Russian climate scientist in northeast Siberia, we welcome your report from the site of a major collapse in the permafrost. Hello, Sasha!”

Chapter Seventy

Now we saw on our screens a middle-aged man wearing a drab olive jacket as he stood with the Russian tundra behind him, reaching back an enormous distance to the flat horizon. He looked at the camera with that Russian combination of utter exhaustion . . . and irrepressible determination. His eyes brightened slightly when he said into the microphone, “Dobrah ootrah, Aili. Good morning from northeast Russia, where the sun is already well up into the sky.”

We heard Aili’s voice, “Good morning, Sasha. Can you show us how your world has changed from a week ago?”

“Yes.” Now the camera pointed down to his rubber boot, which stepped again and again on the moss-covered tundra. The surface wobbled as if it were a giant sponge floating on water. “As you can see, Aili, what was once solid ground beneath the surface is now a sort of jelly. This phenomenon has been reported by my colleagues across much of northern Russia. The very land on which we walk has changed completely.”

He now walked, holding out his arms to steady himself, a short distance and then pointed at a small black pond. “Watch the surface. What do you see?”

We watched, and saw the bubbles bursting at the surface, sending out rings to the mossy shore. There is was: the breath of the Monster. Slowly, quietly, changing the thin, delicate atmosphere which wrapped around planet Earth.

“If we caught that methane in a bottle held upside-down in the water, and then held a match to the gas, it would go ‘Pop.’ Further west, on the Yamal Peninsula, much larger quantities of methane have exploded in the earth, creating giant holes which you may have seen in photographs.”

Sasha again walked across the wobbly tundra to a steel tripod which supported some piece of scientific equipment.

“Here was have an ice core drill—a fairly small one—which can reach down to about three meters. We have already taken a sample” he picked up a steel tube, “reaching down to 2.7 meters. We would expect that the upper meter or so, in the ‘active zone’ of the permafrost, would have thawed. Below that, we would expect to find solid ice. Let’s see what we have today.”

With the help of a young woman, Sasha pulled the outer barrel of the drill away from the inner drill. As he did so, Sasha introduced the young woman, “This is my daughter, Lydia Alexandrovna. She’s been helping me since she was five.”

Lydia gave us a brief smile, then handed the inner drill, about a meter long, to her father. He cleaned away some debris along the length of the drill, then Lydia pushed a long steel plunger into one end of the inner barrel. From the other end dribbled a meter of black slush.

“Yes,” said Sasha, “you can see for yourself that what should have been a solid core of frozen permafrost . . . is now black rotten ice, down to a depth of almost three meters. Later today, we will drill deeper, to see where the solid ice begins. Scientists like us are doing exactly the same thing all across northern Russia, and I imagine in Norway as well.”

Aili said, “We will have a report later tonight from two Norwegian scientists who are also taking core samples on the tundra.”

“Good. I imagine that we will hear from Alaska and Canada, and Iceland and Greenland during the next few days.” Sasha and Lydia set down the two steel barrels on the moss. Then father looked at daughter for a long moment, before she stepped away from the camera.

“Aili,” said Sasha as the camera zoomed in on his weathered face, “there is no doubt that we have passed a major tipping point across a vast area of the Arctic. The shrinking Arctic ice cap tried for several decades to warn us. The record-breaking heat and the drought and the Siberian fires that we could not put out tried to warn us. The methane explosions that left huge holes in the earth tried to warn us. And the methane which has been bubbling up from the bottoms of lakes—for *years*—and even from the bottom of the sea . . . yes, the bubbles tried to warn us.”

He swept his arm toward the vast flat land around him. “And now?” If most of the viewers around the world had never before seen a Russian face filled with grief, they saw it now.

“I could speak about my father’s pioneering work before me. He lived most of his life on the tundra, first as a scientist . . . and then as a visionary. Yes, I could speak about his extraordinary vision for a far better future.

“And I could speak about my own lifetime of work on the tundra. Fresh from the university, I returned home to help my father. One year ago, I could have spoken about my own vision for a far better future.”

He paused, staring into the camera as if asking, Why? Why?

“And . . . I could speak about my daughter’s work on the tundra,” he looked at her (though we could not see her), “her work on the tundra since she was a little girl

walking beside me in her rubber boots. Yes, she could tell you about her dream—her precious, hopeful dream—for a far better future.”

Sasha looked once again at the camera, and we saw a different look in his eyes.

“But I will instead talk about the enormous progress that Russia has made during the past twenty-five years. Back in the year 2018, three European countries—Denmark, the Netherlands and Italy—developed joint ventures with Russia, so that Russia could finally build—years behind the rest of the world—a growing number of factories that produced wind turbines. During the next twenty-five years, Russia worked enormously hard not only to catch up with the rest of the world, but to become a leading nation in the twin fields of wind and solar energy. Our high schools and technical schools and universities now rank among the best in the world. Our engineers work with engineers from a multitude of countries as we help to build the international grid. Yes, Russia is now a member of the global clean energy team.”

It was true. Russian engineers now worked on both sides of the border between Norway and Russia, and no one ever bothered to ask them for their passport.

Alexander Suvorov, Russian climate scientist, now smiled.

“The sun and the wind have brought prosperity to Russia.

“The sun and the wind have brought stability to Russia.

“The sun and the wind have brought world-class education to Russia.

“The sun and the wind have brought us not only membership in global organizations, where we sit around a table, but a role as *colleagues*—as architects and as engineers—on a global team which is building an unprecedented grid that will provide, soon we hope, 100% clean energy to every city, town and village around the world.”

He laughed, shaking his head. “We Russians are no longer debaters, haggling over political points. Now we are *builders*, on a team of builders.

“Yes, the sun and the wind have given us Russians something that nuclear weapons could never give us. Something that aircraft carriers and submarines and supersonic jets could never give us.

“The sun and the wind have given to us—to *all* of us—the genuine opportunity to live in peace with each other. No longer shaking our fists, no longer living with a nuclear knife at each other’s throats. Today, despite the present crisis, we live in a period of peace unprecedented in human history.

“No matter what great challenges confront us—no matter how fierce the methane monster may be—let us be determined . . . to preserve this precious and fragile gift of peace in our world today.

“Otherwise, we—*all* of us—shall never survive.”

He paused.

Aili said, “Thank you, Sasha. You have been—”

He held up his hand, stopping her.

“Aili, today we see all of our progress threatened by a crisis to which we too have contributed. We have burned enormous amounts of Soviet and Russian coal and oil in our country, and we have sold enormous amounts of oil to other countries around the world.

“Russia has contributed to our present catastrophe. And Russia, I promise you, will contribute to the emergency effort to reach 100% clean energy by the year 2050. The people of Russia are ready—with all of their strength and their wisdom and their determination—to shut down the last coal mine, to cap the last oil well, and to celebrate the midpoint of the 21st century with perhaps the greatest achievement in all of human history: one hundred percent.”

He gestured to Lydia, who now stood beside her father, smiling as she held up a page in her notebook on which she had written with dark bold numbers, 100%.

Just that.

For all the world to see.

“Ollu giitu, Aili. SpaSEEbah! Thank you.”

“Thank you, Lydia. Thank you, Sasha. DOOSvihdanya.”

Chapter Seventy-One

We saw Aili briefly—the red sun was lower to the horizon and closer to her right shoulder—as she said, “Károlinná Rávdna Balto, reindeer herder from Finnmark. Buorre beaivvi!”

Then we saw on our screens a woman in denim work clothes, standing on the rolling tundra in daylight. (This interview had been taped during the afternoon.) Behind her, we could see a herd of several hundred reindeer, quietly grazing. A small black dog walked along the edge of the herd.

Károlinná called back, “Ipme! att, Aili.”

“Károlinná, could you tell us please how you feel about the sudden thawing of the permafrost?”

Károlinná looked at the camera for a long moment, her face without expression.

“How do I feel?”

“Yes. You were born into a reindeer herding family. You have raised your own reindeer since you were a child. You are known among the other herders as a person of great knowledge. So we wonder—not just me, but people around the world—how you feel on a day when the Arctic is beginning to change in a major way.”

The woman with a face which had been through many Arctic winters said to us, “Here in Norway, we did not see the signs of the permafrost thawing as early as people did in Russia. But we knew that our time was coming. During the past few summers, we could smell it—and the reindeer could smell it—the faint stink of something dead.”

She looked behind her at her herd, then she pointed toward a range of hills to the west. “Now the stink is no longer faint. We had to move this morning from up on that ridge to down here in the valley, because the reindeer just wouldn’t stay up there any longer. I didn’t want to breathe it either. It’s something rotten, deep in the earth, that’s seeping up. In one spot, I could actually hear the hissing of gas coming up.”

Something to her left, off camera, caught her eye. She nodded as if to someone. Then she told us, “But Aili, we worry about more than the carbon dioxide and the methane. We worry about the diseases as well, ancient diseases which have been frozen in the ice and which may now come up to the surface.

“In July and August of 2016, temperatures in central Siberia reached thirty-five degrees as the heat baked the tundra. A reindeer which had died of anthrax in 1941, and which had been frozen ever since in the permafrost—frozen for seventy-five years—now thawed in the summer heat. The anthrax bacteria in the carcass killed

more than 2,500 reindeer grazing on that tundra . . . and killed a twelve-year-old boy as well.

“*Bacillus anthracis*, as scientists call the bacteria, can survive in permafrost for a long time, perhaps centuries. As the tundra thaws, what other diseases are waiting to awaken, diseases against which we have no resistance? Is the Black Death of the 1430s—which made its way from England to Bergen, and then to Sweden and Finland and Russia—frozen somewhere in the permafrost ice? Is that hideous plague waiting to attack us again?”

Károliinná stared into the camera as if waiting for some answer.

“But apart from such a threat, how will our reindeer manage as winters keep getting warmer and warmer? Already we have periods of rain instead of snow. The rain can freeze into a hard layer of ice over the moss. The reindeer cannot dig down with their hooves to feed. We have seen this catastrophe already.

“Aili, as you know, our people have lived for thousands of years with nature, pure nature, and we have flourished. But we have lived for only a short time with coal, and then oil, and now . . . The land is sick. The sky is sick. The sea is sick.”

We could see, for just a moment in her eyes, the profound sadness.

“Aili, my heart is aching. I can only hope that finally, finally, *they* will stop burning their Black Poison. Whether 100% by 2050 will be enough for the world to become healthy again, I do not know. But I ache for the day when the land is no longer sick. I ache for the day when the cold dry snow lays a clean blanket over the moss of our tundra. I ache for the day when the little calves can walk behind their mothers down the mountain slope to the summer feeding grounds.

“Yes, I *ache* for the time when we people are no longer a plague upon ourselves.

“I ache for the time when we begin each day with a prayer of gratitude.

“Just that. So simple. A prayer of gratitude. Everything else will follow.”

Károliinná placed her hands over her heart as she bowed.

“Ollu giitu, Aili Biriita. Bless you, bless you.”

Chapter Seventy-Two

Aili introduced Bente Solbakken and Nikolas Eide, two graduate students from the University of Tromsø who had been doing summer field work on the Norwegian tundra during the past month. Wearing bright yellow vests, they stood on a broad hilltop; the blue sky behind them reached down to a rolling horizon far below.

Aili asked them, “What sort of work have you been doing this summer on the Finnmark tundra?”

Nikolas explained, “We have been taking permafrost temperatures at various depths, down to 3.2 meters. Consistently, the temperatures are higher than they were a year ago, and much higher than recorded temperatures ten years ago.”

Bente explained, “We’ve also been collecting gas samples and soil samples. The stink yesterday was so bad that I think we must have been standing right on top of a dead mammoth.” She laughed. “They’re not going to be happy when we bring these samples back to the lab.”

Nikolas explained, “Our ice core samples look much like Sasha’s sample. Rotten ice down to 3.2 meters. We’ve ordered another drill so that we can go deeper.”

Bente added, “We’ve seen scars on some of the steeper hills, where the land has broken away and avalanched. It’s as if the mountain is thawing, little by little.”

Nikolas told us, “We’ve never seen this before, not on this scale. From northern Norway to northeast Russia, this is absolutely a major tipping point.”

Aili asked them, “How do you feel about that? You are two young graduate students, witnessing a major change in a critical region of planet Earth. A change which will surely trigger other major changes. The dominoes are about to topple. How do you *feel* about that?”

They looked at each other, silent.

Bente turned to the camera, and we could see in her eyes something other than the serious look of a graduate student. “We are supposed to be scientists. We are supposed to collect information. So I don’t think it’s really hit me yet. But when it does, I think I’ll want to scream.”

“And you, Nikolas?”

Sweeping his eyes slowly, he stared at the distant terrain.

Finally he looked at the camera. “I’ll tell you one thing. I talked with my great-grandmother today. She’s ninety-two. She phoned me, and I picked up her call on our

satellite receiver. She had heard the news and knew that I was out here in the field. She wanted to know what was going on.

“So I told her very honestly . . . that the ice in the permafrost was rotten. I told her that the Arctic tundra had passed a major threshold. I told her that the world was going to get even warmer.”

He looked away for a moment. Finally he turned to the camera.

“My grandmother was silent. And then she said, ‘I am glad I lived when I did.’

“She’s ninety-two. I am twenty-two.” Nikolas paused. “And I am really, really angry.”

Chapter Seventy-Three

We now saw on our screens an elderly man standing in front of shelves filled with books. He had bushy white hair, and wore a pale blue shirt with a dark blue tie. To his left we could see part of a desk. To his right we could see a rocking chair.

Aili greeted him, “Dr. Karl Thorne-Thomsen, professor of climate science at the University of Tromsø. We first met at the Sanctuary Conference in Paris twenty-three years ago. How are you doing, sir?”

Dr. Thorne-Thomsen chuckled. “Well, as you can see, I’m still with you.”

“And we are grateful for that. We just spoke with two graduate students from the University of Tromsø.”

He gestured toward his desk. “Yes, I’ve been watching you on my laptop. I know these two students and can say that they are doing an excellent job. As is Sasha Suvorov, out there in Siberian Russia. I have followed Sasha’s work, and his father’s work, for many years.”

“Yes. Dr. Thorne-Thomsen, I wonder if you could tell us, looking back on your years of experience, how we managed, despite the ample warnings, to reach the crisis which we find ourselves in today.”

“You want to know why we’re in this mess?”

“Yes.”

He thought for a moment, then he spoke with the authority of a man who knows his subject. “Forty years ago, on March 20, 2003, America invaded Iraq with a large number of troops and a massive launching of cruise missiles. Less than two weeks later, on May 1, President George W. Bush landed in a fighter jet on the deck of an aircraft carrier, which was floating safely off the coast of California. He wore a flight jacket as if he had just returned from a combat mission. He met with some of the men on board the ship, then, after changing into a presidential coat and tie, he stood at a podium and spoke to the American nation . . . and to people listening around the world. Few of us remember his empty words, but all of us remember the enormous banner behind him, spread across the bridge of the aircraft carrier. That banner, for all the world to see, made one simple statement, ‘MISSION ACCOMPLISHED.’”

Dr. Thorne-Thomsen grimaced, as if he could smell the stink of a dead mammoth.

“No. Not only was the mission *not* accomplished . . . It was the wrong mission. The mission should have been ‘Sun and Wind’, not ‘Shock and Awe’. The mission should have been ‘Sun and Wind’, not ‘Power and Oil’.

“The mission should have been the dawn of peace, not the launching of yet another war.

“The mission should have been the beginning of the 21st century, not the prolongation of the crimes of the 20th.

“Now, forty years later, we are still paying for that barbaric folly.”

The esteemed professor emeritus looked away from the camera and spat.

Now he looked back at the camera, his blue eyes fierce with outrage beneath his bushy white eyebrows.

“My colleagues and I, around the world, have devoted our careers, our *lives*, to taking care of this fragile planet.

“If I were a student again, in the world today, I would shut down every damn engine in the world that burns oil. Truck engine, ship engine, plane engine, I would shut them *down*.”

He paused, glaring at the camera, then he added, “I would shut down every coal mine. Every coal-burning power plant. I would shut them down.

“Would I be worried about being arrested and sent to prison? We are already in a prison, as big as a planet.”

Then he softened as he said, “Thank you, Aili. Twenty-three years since Paris is a long time. We thank you.”

“You are absolutely welcome, Karl.”

Now on our screens we saw Aili again . . . and the deep red sun moving toward midnight.

Chapter Seventy-Four

Aili spoke into her microphone as if calling half-way around the world, “Marius Jakobsen, my great friend Marius, who was thirteen years old when he first became a White Cap. Marius is now a marine biologist, living on the island of Tahiti in French Polynesia in the South Pacific. Marius, what time is it now in Tahiti?”

We saw on our screens my brother Marius, now thirty-five years old, standing outside on his terrace in the sunshine with a little girl in his arms, and the vast, silver-blue Pacific Ocean behind him. Beside him stood his wife Meherio, her hands on the shoulders of the two young children in front of her, a daughter and a son. Yes, here was the family that we almost lost because of the Snake. Here was the happy, loving, radiant family that we almost lost on the railroad tracks just south of Ås.

“Hello, Aili!” called Marius. He wore a blue Polynesian shirt and khaki shorts. His face was deeply tanned. “Here in Tahiti, the clock is ticking toward noon. We are exactly half-way around the world from you, and on the other side of the Equator.”

“Marius, would you like to introduce your family?”

He grinned. “I sure would. This little urchin in my arms is my daughter Tautiare, which means ‘Little Flower’ in Polynesian. We also call her Mohea, our ‘Beautiful Princess’. She is not quite one year old.” Marius took hold of his daughter’s arm and waved her little hand at the camera. She herself looked only briefly at the camera, then she stared with her dark eyes at something to her right and up a bit: perhaps the dove that we could hear cooing faintly in the background.

“This Polynesian beauty beside me is my wife Meherio, which, in her language, means ‘Mermaid’. She is an attorney who works especially with the laws of the sea. You shall hear from her shortly.”

Meherio, who wore a yellow wrap-around Polynesian dress, smiled as she nodded hello.

“The two hooligans standing in front of her are Vairea, our daughter of five, and Anapa, our son of three. Vairea’s name means ‘Sparkling, joyful water’, which of course is the sea. We also call her ‘Purotu’, which means ‘Child of the gods’. She speaks three languages, Polynesian, French, and English. She also speaks a bit of her father’s Norwegian.

Vairea smiled as she waved to the camera and announced, “Jeg vil gjerne se nordlyset!” I would very much like to see the northern lights.

That, I remembered, was what Meherio had said to Marius (in French) in the university library on the day that she captured his heart.

Marius continued, “Anapa’s name means ‘Sparkling Sea’. When we go sailing, both he and his sister can see the sunlight sparkling on the water, and then they know where their names come from. They know as well . . . something about the spirit inside them.”

Anapa looked up at his father with a smile of . . . gratitude, perhaps.

Marius laughed. “We also call him Ataroa, which means ‘Big Smile’.”

Yes, both the boy’s eyes and his smile came from his father.

Marius looked over his right shoulder. The camera focused on a distant, misty green hump of an island. “I hope you can see Mo’ore’a Island, seventeen kilometers from the coast of Tahiti. From late June to October, the waters around the island are a nursery for humpback whales, which swim all the way from Antarctica to give birth to their calves here in the warm, safe sea. Yesterday, we sailed out to Mo’ore’a, where we watched the whales as they rose into the air and then *splashed* back into the sea.”

Anapa chirped, “We went snorkeling too. I saw a baby whale with its mother.”

“So did I!” added Vairea. “We were *close*!”

“Yes,” confirmed Marius. “We were close. We were swimming in *their* world. We were guests . . . and we must always remember that we are guests.”

The camera now zoomed in for a close-up of Marius with his daughter in his arms.

He said, his voice now absolutely serious, “Whales have more right to live on planet Earth than people do.”

He paused, then the man of science continued, “No whale ever killed a coral reef.

“No dolphin ever drove another species to extinction.

“No turtle ever changed the chemistry of the oceans, thus threatening marine life around the world.

“No tuna ever poisoned the atmosphere with a complex mix of pollutants, thus threatening *all* of life on planet Earth.

“No shrimp ever melted the Arctic ice cap with such little concern.

“No copepod ever created droughts and floods and famines around the world.

“No algae ever created the climate wars which may plague us for centuries.”

Marius stared at us. Did we hear? Did we listen? Did we understand?

Then he said, “I come to you today with love and a question.”

This was Marius the Teacher. No Powerpoint. Just love and a question.

“I feel a deep love for the whales, which I have studied from the Arctic to the Equator. A person who swims in the sea with these great creatures must regard them with awe, and respect, and an ever-deepening love.”

He paused. No rapid-fire Bullets of Information. Just . . . an ever-deepening love.

“I feel a deep love for the dolphins, which posses a quick intelligence, and a vibrant social life. Both of these qualities are, I believe, far more useful than the collective suicidal madness of my fellow humans on land.”

A long silence. We could hear the dove cooing in the background, and the whisper of the breeze through gently rattling leaves.

“And I feel a deep love—a love far greater than I ever thought possible—for my Polynesian wife, who understands, as a child of her culture, that God did *not* create the creatures of the world so that we could plunder them and slaughter them and poison them, and finally deprive them of the fragile home in which they live.”

The camera zoomed back as Marius looked at Meherio, who nodded that he was right. God had an entirely different purpose.

“I feel a deep love for my children,” Marius rocked his daughter in his arms, “who did not ask to be born into a changing world.” He added, with fierce anger in his voice, “Who do not *deserve* to be born into a changing world.”

Rarely had I seen my brother so angry. The thawing of the permafrost in the Arctic directly threatened his family on the other side of the Equator.

“My question for you today is . . .

“Are people capable of learning how to live in this world of miraculous life?

“Are they capable of even trying?

“I would like to believe that we are, but the evidence is slim.

“Yes, we need a world powered by one hundred percent clean energy.

“And yes, we need—urgently need—as Meherio will argue, new laws in our social contract with our fellow creatures on planet Earth.

“But I would add, as a man who has spent years swimming in the oceans of the world, that we also need an entirely new attitude toward this planet, this Cradle of Life, the only planet of its kind as it circles a star in the vast emptiness of our corner of the universe.”

He paused, then he told us vehemently, “Until we feel the necessary respect, and love . . . we are doomed.”

He rocked his daughter, then he lifted her up and kissed the top of her head.

“I hope, I deeply hope, that the peoples of the Earth, at this critical moment in their long history, can truly embrace such a radically different attitude toward the whales, toward the polar bears, toward the seals, toward the reindeer, toward the shrimp, and toward the algae that grows on the bottom of the ice.

“Yes, and toward the Arctic ice cap itself, that absolutely essential sheet of curving ice that cools the top of our planet.”

He paused, then he took us one step further.

“And then . . . if we can learn to love and respect life, *life*, on this rare and fragile planet, I believe that we can also learn to love and respect each other.”

With his child in his arms, Marius bowed toward the camera.

“Thank you. Mauruuru ia outou. Merci. Ollu giitu.”

Chapter Seventy-Five

Marius and his three children now departed from view, leaving Meherio in her long yellow dress alone on our screens, looking into the camera with the composure which Marius so much admired.

We heard Aili's voice, "Welcome to Meherio Tehaapapa, an attorney with a law degree from the University of Paris. Meherio, you specialize in the international laws which regulate our use of the oceans. You have argued your cases in some of the world's highest courts, and you, most notably, were responsible for a complete prohibition against whaling."

"That is right," she said, as calm as if she spoke to a Supreme Court judge. "I am not well-liked by some people in Japan and Norway, Iceland and South Korea, but I am extremely well-liked by the minke whales."

Aili resounded, "Yes, I too have met with some resistance in my work."

Meherio nodded, almost imperceptibly.

"Well then, I wonder if you could comment on the role which the legal profession plays in our troubled world today. How can we best respond to the permafrost crisis in the Arctic? And why does this crisis matter to people who live so far away, on the other side of the planet?"

We waited for a long moment before Meherio replied.

"As an attorney, a person trained in the field of law, I would like to ask our viewers a question.

"If I, working as a cook in a kitchen, mix a bit of arsenic into your pudding, then serve you that pudding with a spoonful of fresh cream on top . . . and you, while eating your pudding, suddenly feel a great pain in your stomach, and struggle to stand up from your chair, and then topple dead to the floor . . . have I not committed a crime?"

As I had so often waited in silence for Aili to continue, Aili now waited in silence.

"Even on the battlefield of war, were I to release poison gas which drifts on the wind toward my enemy, killing them by the hundreds . . . have I not committed a crime?"

Her eyes asked us to consider, to evaluate, to make a judgment.

"In the same way, if we together release decades of poisonous gasses which now threaten to change the biosphere of this planet to such a degree that life itself

faces unprecedented catastrophes, including the extinction of a growing number of species . . . is it not a crime to *continue* to release these poisonous gasses? And if this madness *is* a crime, then do we not need new laws to *stop* it?”

She spoke the word “stop” with just the faintest edge of anger in her voice.

“I vehemently submit that we need new laws to stop these climate crimes. From the Ten Commandments which Moses brought down from the mountain, to the Charter of the United Nations and its code of human rights, people have responded to the evils in their world by writing new laws, *strong* laws, which attempt to control those evils.”

She was the first of Aili’s experts to speak not about just the *problem* of methane bubbling up from the rotten ice, but about “these climate crimes” which had caused the bubbling. Further, we were dealing with not just crimes, but with “evil” in our world today.

She continued, “Our present laws of the sea, some of them traditional, some of them formulated since World War Two, have a very clear purpose: to regulate the zones of various national fisheries, to regulate seabed mineral rights, to regulate navigation, and to some small extent, to regulate pollution. Norway and Russia share both a land border and a sea border; the laws regarding these two types of borders are very different from each other. Land border disputes can be adjudicated fairly quickly. Sea border disputes, however, may persist for decades.”

Yes, just where was a hidden submarine allowed to patrol, and with what weapons on board?

“Our present laws of the sea were established primarily for commercial reasons, and for military reasons. They serve the interests of people. But they do *not* serve, in most cases, the interests of the creatures which live in the sea. We can legally plunder the tuna, the swordfish, and a number of other species almost to extinction. And we can legally warm the oceans, and acidify the oceans, with our unrelenting carbon dioxide pollution. We can thus kill the coral reefs, devastating all of the life that once lived in those reefs. We can kill as well, with our acidification, the many forms of life which have a calcium shell, from tiny microscopic creatures that are essential to the oceanic food chains, up to krill and copepods and pteropods, also critical to the food chains. We threaten even the oysters which we humans love to eat.”

Silence. Meherio’s silences, I noted, were even longer than Aili’s silences.

“When was the last time anyone went to prison for the crime of ocean acidification? When was the last time anyone went to prison for aiding and abetting

the melting of the Arctic ice cap? When was the last time anyone went to prison for the theft, the *theft*, of the polar bear's habitat? Of the reindeer's habitat? Of the habitat, the *home*, of the Sami people?"

Silence. We waited.

"If life on planet Earth is sacred—for no other reason than because it is the *only* life which we know of in the universe—then I vehemently submit that our willful, legal, and unrelenting devastation of this sacred life . . . is more than a crime. What we are doing is something evil."

There, she placed it right in our laps. Evil.

"Yes, we need new laws to stop these climate crimes. To stop this global evil.

"I vehemently submit that the entire industrial process of producing and selling oil, for the sole purpose of *burning* that oil, is a crime against humanity, and a crime against life.

"Further, we need new laws in place so that the sun and the wind can do their work. We *should* have had these laws sixty years ago. Decades have passed during which the politicians have bickered and dithered and put up their political barriers. Decades have passed during which the oil companies and their scurvy minions have lied to us about their profits as they poisoned our planet. Decades have passed while a complacent public let these thugs do their dirty work."

She shook her head. Her long black Polynesian hair swept across her shoulders.

"No more. We need new laws, which are internationally binding, and utterly without loopholes.

"And we need to build our clean energy system *non-stop* until we reach 100%."

She glared at the camera, with the same fearless outrage which had confronted judges and juries and corporate attorneys in courtrooms around the world.

"This is our only chance.

"Otherwise, every single one of us . . . is a criminal."

Meherio did not bow. She walked off the set, leaving the silver-blue Pacific Ocean on our screens.

Chapter Seventy-Six

And so it came to pass, that when my turn came to speak, I was with the White Caps at their headquarters in Oslo, still on the second floor of St. Olavs Gate 21B, near the law school, where a steady flow of new White Caps and some Old Timers had been weaving the world together for twenty-four years. I wanted to honor them, and I wanted the people around the world who had corresponded with them to see at least a few of them face to face.

So when Aili, on the television screen mounted on a wall at one end of the room, greeted us with a vibrant “Bures!”, thirty-two White Caps called back with a vibrant “Bures bures!”

Then our NRK cameras went live, and we were on the screen: each one of us wore the signature white knit dome as we sat at our laptops along rows of tables. As our faces indicated, we were from a multitude of countries, and as our smiles indicated, we were deeply proud of the work that we did.

My mother was there, one of the Old Timers. She had gotten permission to miss her night shift so that she could be with us at a quarter to midnight, with the organization which had brought her such happiness, especially at the picnics at Sognsvann, following her difficult divorce from the Snake. She loved these people, and she could *still* remember everyone’s name.

Erling was there, up at this late hour, though he would start his shift at the hospital at seven o’clock tomorrow morning.

And Sigurd was there, one of the most reliable of the Old Timers. He had first worn his white cap when he and Marius had been only thirteen years old, working during the Peace Summer of 2021 on the war crimes in Syria. He and Marius still wrote back and forth once a month, from Oslo to Tahiti, or wherever it was in the oceanic world that Marius happened to be at the time.

I stood at one side of the rectangular room with a microphone, wanting no special prominence. I spoke on everyone’s behalf.

“Aili, I want you to know that this crew has been enormously busy all day, contacting schools and organizations around the world to alert them about the *urgency* of the situation in the Arctic.”

“Ollu giitu,” said Aili from up above the Arctic Circle. “Ollu giitu to our sturdy White Caps.”

“I would also like to say that the thirty-two of us here tonight are only a small fraction of the White Caps who have worked in this office over the past twenty-four years. We are not sure of the exact number, but we have calculated that roughly one thousand, two hundred and fifty White Caps have worked here, some paid, most of them volunteers. They live now in countries all around the world, still wearing their white caps, and still doing some sort of work that benefits all of us.”

My mother at her desk started to clap, no doubt remembering some of the earliest White Caps. Others in the room took up her applause, as they saluted those who never let the communications hub falter as it kept reaching out to schools, to refugees, to Green Grandparents, to clean energy entrepreneurs, for twenty-four years.

“Aili,” I said with special pleasure, “we want our viewers to know that three of our workers here at headquarters tonight are the *children* of earlier White Caps, carrying on their parents’ work.”

I gestured for the three to stand; shyly, they did. The other White Caps of course gave them a hearty applause. Nodding their gratitude, they quickly sat back down.

Now came the time for my short speech.

“Aili, we have all talked this evening about what we would like to say about the crisis in the Arctic. And we have concluded that our message is very simple: We have come so far during the past twenty-four years. Never before in human history have so many people from so many backgrounds worked so hard together to build a better world. We can’t stop now. Let this tipping point—the thawing of the permafrost and the release of unknown amounts of greenhouse gasses—*not* be the death knell of our once healthy Earth, but the death knell of the fossil fuel industry, forever.” I repeated, “*Forever!*”

“Yes, as we have heard from Meherio tonight, we have lived with this crime long enough. We have lived with this *evil* long enough. The White Caps believe, deeply believe, that the Renaissance of the 21st century is still within reach.”

My colleagues filled the room with their quiet clapping.

“I especially want to say to the young people around the world: This is your world, and your future. We older folks, we *believe* in you. Don’t let the hideous dragon take away your dreams. The Renaissance of the 21st century, *your* Renaissance, is still within reach.”

Knowing who the next and final “expert” on the program would be, I concluded, “May the dawn bring us all a bright new day.”

And now we saw Aili back on the screen, with the deep red sun low to the horizon, nearly touching her shoulder.

Chapter Seventy-Seven

Ørnulf was with Helena when the train from Oslo pulled into the Lillehammer station at 15:36. Uncle Isaac had phoned him, and Ørnulf had brought his Japanese tourists back to the hotel as quickly as he could. They did not mind cutting their trip a few hours short; they were far more disturbed about the news from the Arctic.

Ørnulf was thrilled that Aili had asked Helena to sing tonight, just before midnight. He was also very glad that Helena had phoned Dominique, who insisted on taking the 13:34 train from Oslo to Lillehammer, so that he could not only help her as she wrote her song and then rehearsed; he wanted to back her up with his guitar.

Helena had also phoned a friend from Foss High School who played drums. Could he hop on a train to Lillehammer and back her up tonight? Could he phone some of the other musicians at Foss? Were they all off somewhere on vacation? Was anybody still in Oslo?

But mostly, as the long red train slowed to a stop along the Lillehammer platform, Helena was profoundly glad that Ørnulf had come immediately back to be with her. And Ørnulf was profoundly glad, from the moment he spotted her standing outside the hotel with her guitar still in its case, and saw the look of gratitude in her eyes when he called her name, that he was here with her, taking care of everything, so that tonight she could be, as he called her, “The Voice”.

Uncle Isaac found a substitute for Helena to handle the lunch shift. That enabled Helena to work on the lyrics as she sat on a boulder in the sunshine beside the lake . . . while Ørnulf located a friend who worked at the Norwegian Film School, which was part of Lillehammer University College. Yes, they could use one of the two sound stages; yes, Per would round up some studio technicians; yes, they could rehearse from 16:00 right on through to show time: five minutes before midnight; yes, they could transmit live; and yes, they could record.

Ørnulf told his friend, “The beer and pizza are on me, Per. We’re making history tonight.”

Helena was gripping Ørnulf’s hand when the train doors opened . . . and her great friend Dominique, now eighty-three years old, peered out, spotted her and beamed his irrepressible smile. Gunnar, the drummer from Foss, stood just behind Dominique, ready to help him down the steps, but Dominique managed just fine.

Helena called, “Dominique! You are my hero.” Once he was safely on the platform, she gave him an enormous hug.

And then—Helena couldn’t believe it—Dominique and Gunnar were followed by five members of Dominique’s band, all of them in their seventies and eighties . . . and by six students from Foss, some of them chorus, some of them instrumentalists, all of them teenagers. She had a full back-up crew! Now she could fill out the score, giving it a dozen new voices. And Ørnulf had managed to get a sound stage!

It took a few minutes to unload all of the instruments off the train, as well as the overnight suitcases. Ørnulf, *impresario extraordinaire*, arranged for taxis to take the musicians and their baggage to the College. He also phoned Uncle Isaac and arranged for nineteen catered dinners—for thirteen musicians, four studio technicians, himself, and the Star of the Show—to be delivered from the hotel kitchen to the Film School sound stage at 17:00.

He ordered as well a late-evening meal, to arrive at 21:30. With baskets of ample bread, and six bottles of good red wine.

When the musicians arrived at the College, they were greeted by Per and the studio technicians. They went directly to the sound stage, which was state-of-the-art professional. They unpacked their instruments, and then—with Helena’s lyrics and the score, which Per had copied for everyone on an office machine—they took a look at Helena’s song. Dominique with his twelve-string guitar and the other musicians in his band immediately began to flesh out the background. A trumpeter, a flutist and the drummer from Foss found their places within the arrangement, while four members of the Foss chorus developed a rich back-up to Helena’s soprano voice.

By the time the dinners arrived, they had gotten a good start on the full score.

They ate outside at some college picnic tables in the sunshine, getting to know each other and stretching their legs on the lawn.

By 18:00, they were back at work.

By 19:30, they recorded their first take.

By 20:00, they recorded their second take.

By 21:25, they recorded their third take, which was excellent.

Dinner arrived at 21:30. Once again they ate outside, savoring the cool summer evening and the view of the hills surrounding Lillehammer. The sun had set; the first faint stars were appearing in the turquoise sky.

Ørnulf went from picnic table to picnic table, refilling glasses with red wine.

By 22:45, they had gone through the song one more time and knew that they were ready. Helena was holding back; she did not want to tire her voice. But she hit every note perfectly.

* * * * *

Starting at 23:00, they watched Aili and her guests on a television (borrowed from a classroom) which they set up in the studio. Helena listened to her beloved Uncle Marius, and to his extraordinary wife Meherio, both of whom gave her strength for the song that she would sing tonight.

While her mother was speaking from the White Caps' headquarters, Helena and her musicians waited at their places on the sound stage. They were ready.

Aili now spoke from the television screen, "Helena Jakobsen, eighteen years old and already a seasoned musician, has written a song which will take the peoples of the world through the last few minutes . . . to midnight, when the sun," Aili gestured toward the deep red sun behind her, almost touching the horizon, "will be due north, at the end of a day of devastating news, and at the beginning of a day of hope."

Helena was breathing deeply. Ørnulf stood beside the main camera, with his look of bedrock confidence.

"Helena has been joined in Lillehammer by some of her friends. You can find her lyrics on the White Caps' website, translated into twenty-seven languages. By tomorrow morning, the recorded song itself will also be on the website, with credits to the musicians and studio engineers."

A short pause.

"Helena," said Aili, "we welcome you. The world is waiting."

And now the cameras in the Lillehammer studio went live, and Helena was on the television screen—on one, two, three billion television screens around the world—while the red sun, in a split-image, spread its radiant crimson light across the dark rolling tundra, and the clock in the lower left corner ticked to . . . exactly four minutes to midnight.

Helena played the opening chords on her six-string guitar while Dominique—just Dominique—accompanied her with his Spanish twelve-string. Now the drummer joined them with a soft but growing roll, and the trumpet announced the arrival of some important message. The chorus swelled above the instruments, singing without

words in a recognizable replication of the haunting notes of a Sami *yoik* as their interwoven voices reached out over the tundra.

Now Helena the Determined leaned toward the microphone and told the world,
 “The sun is bringing us a new day.
 So that we can live in a new way.
 Our poor Mother Earth, we’ve done her wrong.
 Now we want her healthy and we want her strong.”
 The chorus echoed the final line.

“So we make our promise: It’s our intent
 To clean up our power to one hundred percent.
 No more oil and no more coal,
 No more living with this crime on our soul.”
 The chorus echoed the last two lines, with emphasis on “crime”.

“Nine months from now, on the first day of Spring,
 Along with the birds, our hearts will sing,
 If we can reach ninety, or ninety and five,
 Then we’ve got a chance to maybe survive.”
 The chorus sang “maybe, maybe, maybe, maybe, maybe”.

Now Helena stepped back from the microphone and the musicians took over. Each instrument played a riff on the central melody, their improvisations building in strength, while the chorus sang “seventy percent . . . seventy-five percent . . . eighty percent . . . eighty-five percent . . . ninety percent . . . ninety-five percent” with growing strength.

Now the trumpet, played by Katerina from Foss, backed by a cello in the deep register, played by Lars, who had retired from the Oslo Philharmonic, proclaimed the ultimate victory, as the chorus sang “one hundred percent . . . one hundred percent . . . one hundred percent” with one bass voice, one tenor voice, and two sopranos that rose to shimmering heights.

Helena leaned toward the microphone.
 “Nine months from now, a new world shall be born.
 Nine months from now, no more shall we mourn.

We'll build our grid, and we'll harness the sun,
Until for the Earth, and for *life*, the victory is won."

The chorus took the word "life" and ran it through a long improvisation, which ended with the strains of a Sami *yoik*, invoking life in the Arctic.

"Yes, we'll build our grid, and we'll harness the wind,"
Helena let loose with every bit of passion in her young heart,
"Until for the Earth, and for life, the victory is won."

The chorus echoed the final line.
And then, as the clock ticked . . . to exactly midnight, Helena sang once again,

"Until for the Earth, and for life, the victory is won."
She held the last word as the most ringing high C she had ever sung in her life.

Helena played her closing chords, with Dominique backing her up.
The drum rolled, and the trumpet sounded a final flourish.
And then . . . silence filled the night.
The red sun had moved into a new dawn. A new day.

Aili came back on the screen. "Ollu giitu, Helena. Ollu giitu to your extraordinary band."

"Thank you, Aili," said Helena. Then she added, her voice brightening, "Thank you, World."

She looked at Ørnulf. For the first time ever, she saw tears running down his cheeks.

She switched off her microphone, made sure that the cameras were no longer live, then she turned around and bowed to Dominique. She swept her arm to all of the musicians as she cheered, "We did it!"

And then, becoming silent, they faced the television and listened to Aili.

Chapter Seventy-Eight

Facing the camera with the red sun now close to her left shoulder, Aili said with quiet dignity, “Bures.”

She smiled faintly. “I would like to thank our guests tonight. They gave us a lot to think about.”

Now she was silent, turning her head and listening, as we all listened, to the distinctive call of a bird which must sleep all day, for it is wide awake through the summer night. The great snipe, or *dobbeltbekkasin* as we call him in Norwegian, perhaps wanted to give us just a bit more to think about.

Aili turned back to the camera. “Let me begin by making two concrete suggestions.

“I suggest that we build a multitude of cathedrals, all around the world, cathedrals which honor life, cathedrals where *all* are welcome.

“We need cathedrals with innovative architecture, reflecting the cultures of the world, the biospheres of the world, and the dreams and the visions of the world.

“Let us strive to find new attitudes, and new beginnings, in these cathedrals of the 21st century.”

She paused, giving us time to think.

“I further suggest that with equal ingenuity, we continue to rebuild our schools. For how many years did we burn oil and build weapons without adequately addressing either issue in the classroom? Good schools do not hide from the urgent issues, but instead embrace them, so that students do not sleep until disasters awaken them.”

Now, as the red sun moved incrementally but perceptively away from her left shoulder, she gave us a history lesson.

“I am mindful of a time when a brave group of people possessed such powerful determination . . . that although they faced fierce, and sometimes lethal, opposition, they prevailed.

“In December of 1955, in Montgomery, Alabama, in deeply racist America, African-Americans decided that they would no longer ride at the back of the bus. They would sit wherever a seat was vacant, on an equal basis.

“In addition, they demanded *jobs* as bus drivers. And they demanded convenient bus routes through their own neighborhoods.

“Therefore, during the meetings which they held in their crowded churches, they decided to boycott the Montgomery bus system. Instead of riding the bus where

their rights were trampled, they *walked* to work, and they walked to school. The few African-Americans who owned cars offered taxi services to the elderly, for the same price as the cost of a bus ticket.

“The white folks thought that the bus boycott might last a few days. Then the ‘darkies’ would get tired of walking.

“But the African-American community of Montgomery, Alabama did not get tired of walking. Quite the contrary. They walked to work and they walked to school for three hundred and eighty-one days—from December 5, 1955 to December 20, 1956—in an act of peaceful defiance which captured national and international attention.

“On November 13, 1956, the United States Supreme Court in Washington—to which African-American lawyers had taken their case—ruled that segregation on public busses was unconstitutional. The Montgomery bus company accordingly offered equal seating to all customers. African-Americans were hired as bus drivers, and new routes were created through African-American neighborhoods.

“And that—as any student of the American Civil Rights Movement will tell you—was just the beginning.”

She paused.

“Let me point out that while people were walking, and gathering in their various churches to attend their meetings, and while people were going to jail for their ‘*crimes*’, it was a group of lawyers who brought about the final tipping point: a group of lawyers who challenged the Jim Crow laws in America, and helped to write *new* laws so important that they became Amendments to the American Constitution.

“In the same way, we need to challenge today the laws which enable coal and oil companies to continue to poison our world. We need *new* laws, international laws, based on a new vision for the 21st century.

She paused, then she added firmly, “And we need new laws which bring the *real* criminals to justice.”

Aili glanced at the red sun behind her.

“People paid by the coal and especially by the oil industries have been telling us for years that we could never maintain our economy without coal and oil. They tell us that clean energy could never do the job.

“I suggest . . . that we get off the Coal and Oil Bus, and do some walking in the sunshine. I suggest that we do some walking with the wind on our faces. Our economy will not suffer. It will flourish. We have already seen the growing number

of jobs which are created when we team up with the sun and the wind. We have already seen the burgeoning number of new companies, reaching with the hand of friendship across international borders. We have already seen the prosperity which brings with it both a stronger democracy . . . and a stronger peace.

“Let’s not stop now. Let us look upon this present crisis as a final warning. And then, let’s get back to work.”

Aili reminded me—I remembered it from a history class in high school—about a time when, during Britain’s darkest hour, a fellow named Churchill had spoken.

She stared for a long moment across the vast rolling tundra, burnished red by the sun. A breeze stirred her dark hair.

Then she raised the microphone and told us, “Yes, I feel the fear—and deeper than the fear, I feel the inescapable dread—of being trapped on a dying planet. My husband and I are parents of three remarkable children. Sometimes at night I wake up and I feel the horror and the grief and the despair so deeply . . . that it seems as if the red blood in my veins has burned black.”

She stared at us, this profoundly honest woman.

“But my Sami people did not live in the Arctic for thousands of years by giving up. They weathered the storms. They endured the cold and the darkness of the long winter night. And they worked with their reindeer through every season of the year.”

A brief pause.

“Yes, first comes the fear.

“Then comes the grief.

“Then comes the outrage.

“And then comes the *determination*.

“The determination to work with Mother Earth so that her fever will pass.

“The determination to work with Mother Earth so that her oceans will become healthy again.”

Aili Biriita now reached into the reindeer hide pouch at her waist . . . and put on her white cap, twenty-four years old.

“Yes, we will work with Mother Earth until once again she wears the cap of curving ice which keeps her cool, and stable . . . so that she can be the perfect planet where precious life can flourish.”

Placing her hands over her heart, she said, “Ollu giitu.” And then she bowed, as the deep red sun behind her swung incrementally further into a new day.

Part XIV

Either . . . Or . . .

Chapter Seventy-Nine

Either . . .

We learned, during the next several years, that one tipping point triggered multiple tripping points. And they, in turn, triggered a complex network of tipping points. So that the planet kept changing—in ways large and small—until our lives were trapped in an avalanche of horrific events which we could barely comprehend, and certainly could not control.

Or stop.

All we knew for sure was . . . that we were doomed. And we were to blame, because we had waited too long.

We should have shut down the coal and oil in the year 2000. We should have begun the new century with an entirely new way of thinking. But despite the two referendums, and despite our extraordinary progress in building the international clean energy grid, we kept burning the coal, and kept burning the oil, and never . . . quite . . . stopped.

We never fully eliminated that blanket of pollution around the planet, but instead kept adding to it, though in diminishing amounts. And so the world kept warming. The atmosphere kept warming, the oceans kept warming, and the land kept warming, while we burned the coal and the oil that were “essential for the maintenance of our economy”.

And then, as summers became incrementally hotter and hotter, we reached that first major tipping point in mid-July of 2043.

We had been warned . . . we had been warned . . . and now it was happening.

A ring of rotten ice around the top of the world gradually but steadily released planetary amounts of greenhouse gasses into the atmosphere.

Weather stations on all seven continents reported incremental increases in temperatures, at various elevations, during all four seasons.

During the month of September in 2045, the hurricane which was born in the mid-Atlantic, and which grew and grew—fed by the heat energy in the oceans which became kinetic energy in the winds—swept up the eastern coast of North America from Washington to New York and Boston, and even as far north as Halifax. The

unprecedented storm smashed through years of Storm Surge Preparations (SSPs), blasted wooden homes to sodden shreds, and rocked the tallest buildings until the ground floors were ripped from their foundations.

Those who managed to crawl out from the wreckage staggered westward toward refugee camps. No attempt was made to restore the Eastern Seaboard. It became a mausoleum, not only for the millions who had died and who still lay somewhere in the crumbling ruins . . . but for civilization in the New World.

During the summer of 2046, coral reefs, already stressed by warming oceans, already stressed by acidic oceans, showed a sudden spike in bleaching as they passed a critical tipping point and died.

The myriad forms of life that had once flourished in the reefs—the fish and the sponges and the lobsters and the snails—all reached their own tipping points, so that populations rapidly diminished.

So it was in the forests. So it was on the mountains. So it was on the tundra. So it was on agricultural land north and south of the Equator.

We felt, every morning when we awoke, that we were trapped on a dying planet. And every single one of us thought back to 2020, to 2010, to 2000, to 1990, to 1980, when we should have . . .

When we should have . . .

Chapter Eighty

Or . . .

We learned, as we listened to those speakers from around the world, that if you don't stop putting wood on the fire, the smoke does not stop rising into the sky.

So we stopped putting wood on the fire.

Though we had been harnessing the sun and harnessing the wind at a steady pace for the past twenty-five years—the first floating wind turbines had been launched off the northern coast of Scotland in September of 2017—we now increased that pace at factories around the world. As global investments more than doubled, new workers were trained in growing numbers, new factories were built on every continent, and old factories were expanded. Helena's generation—the second generation called upon to build the Renaissance—rose to the occasion brilliantly.

Though it took months to build a wind turbine, and months more to install it, solar panels could be produced in great quantities much faster. Every roof in every city, town and village around the world became a potential site for catching the sun. Germany—guided early in the century by the indomitable Angela Merkel—had already shown the way to turn the roof of nearly every home, factory and parking garage into solar power plants. During the 2040s, Germany led a coalition of nations—including Norway, which dipped deep into its sovereign fund—in a heroic effort to provide solar panels to megacities and remote villages around the world, where local workers, freshly trained, installed them with both a sense of urgency . . . and pride.

China, the country which had made such prodigious efforts not only to catch up with the modern world but to surpass even America as the number one producer of solar panels, wind turbines, and electric transportation, led a coalition of Asian and African countries, enabling them to make more progress in five years than they had in the past fifty.

Turbines spun in ocean currents, turbines spun in tides flowing in and tides flowing out, turbines spun on kites that reached higher and higher into upper elevation winds. These new generations of visionary technology kindled a pioneering spirit which spread around the world.

That same spirit enabled new experiments in agriculture to flourish. It promoted new approaches to transportation. And it engendered the great masterpieces of the Renaissance: the absolutely new cities, designed with astonishing ingenuity, and built from scratch a safe distance from the flooding coastlines. Sanctuaries and residential neighborhoods were woven into a livable quilt, so that nature was no longer a stranger to a child growing up, but a neighbor.

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But something more. Even while we kept our eye on global temperatures, and carefully watched the Arctic ice cap with satellites to measure its size through the seasons, and noted parts per billion of methane and carbon dioxide in the atmosphere, we kept our eye on each other. Where were farmers struggling with drought . . . and how could we help them? Where were hospitals overcrowded with victims of heat waves, or malaria epidemics . . . and how could we help them? Where were people struggling with the devastation of a typhoon, or a wildfire . . . and how could we help them?

That was the spirit of the age. People might be desperate, but they knew that help was coming.

In part, we became very skilled in crisis management. Young people especially became extremely adept at tackling the critical problems, and they were given the financial and logistic resources that they needed.

But equally important, we were preserving the *peace* which was so important for our survival. Before a drought caused mass migrations and violent conflicts at the borders, we brought in wind- and solar-powered desalination plants so that we could turn sea water into fresh water, and then pipe the water to wherever it was needed. Before a city devastated by extreme weather collapsed into anarchy, the rescue crews, the food, water and shelter people, the medics—and the peacekeepers—arrived.

As we became skilled in dealing with the collapse of agriculture in some stricken region, we became equally skilled in dealing with minor skirmishes before they became major battles. And in that endeavor, because we truly had the backing of the peoples of the world, we were almost consistently successful.

Methane may be the monster, but war was a monster far worse.

We remembered back to that referendum in 2021 when over five billion people voted for peace . . . and we honored the promise which we had made to each other.

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And yes, we built the new cathedrals, with innovative architecture, reflecting the cultures of the world, the biospheres of the world, and the dreams and visions of the world. They too became the masterpieces of the Renaissance of the 21st century, places to which we journeyed as pilgrims.

We built cathedrals which honored life, so that we would never forget how precious and fragile life was, on the one planet which was the Cradle of Life.

We built cathedrals where everyone was welcome.

And that, too, was part of the spirit of the age.

Either . . . Or . . .

The decision is ours.

* * * * *

John Slade

Ås, Norge (During a very hot summer.)