

# Preface

My sister is older and although I'd never tell her as much, wiser as well. We're racing outside and I run too fast while trying to keep up with her long legs and I fall to the ground. I look around, confused as to how I've wound up like this, and almost immediately move to get to my feet to keep running.

"Stop", she says, slowing her own jog. "Stay on the ground. Linger there. Falling is an opening. Think on what it is opening to."

I obey. I sit on the ground. I remember my lessons.

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Four simple words defined the age preceding this one. "Nobody saw it coming". It was a catechism. It was the rallying cry of collapse.

Families in Norfolk were separated at gunpoint and interned without records once conditions became severe enough. Few protested. Nobody saw it coming.

The first walls that actually worked were built by the accidental beneficiaries of the northward-driven rainfall and temperate climate. A novel strain of fascism, confident and moralizing, committed to saving us from ourselves, came to power first in Canada, then in Japan, in New Zealand, and then across parts of Africa, Asia, South America. Blood and soil all over again. Nobody saw it coming.

Extreme weather put digital and physical infrastructure through shock after shock. Higher temperatures meant more need for indoor cooling, which put constant stress on energy grids and digital infrastructure. Corporations were fully integrated into nation states, or religious states, or eco-states. A few of those corporations remain, continuing the thankless work of capital acquisition and value creation. But nobody saw it coming.

We are nothing if not adaptable though. We pursue beauty even though our definitions had to change. We now have a language for devastation. For the irreconcilable. We no longer expect all the king's horses and all the king's men to put the egg back together again.

Born into an eco-state, one can seek a beautiful life by giving up on ideas of autonomy in exchange for a cold and smooth certainty, a distant aesthetic and order.

Born in the wilds, one can seek beauty from the land, by relying on one's neighbours and the locally assembled and improvised infrastructure that maintains tenuous and wavering connection to other towns in other places imagining their own beautiful lives. One comes to find beauty in loss and tragedy.

One can seek beauty in the past, by recovering stories buried under sand, competing with corporate AI for access to generations of impossibly fertile creation and then working a digital alchemy on recipes we have collectively forgotten how to prepare.

Other, even older ideas of beauty persist as well. Faith systems were emboldened by such unambiguous evidence of their divinity's displeasure. Nationalism took on greater urgency as the movement of billions threw the efficacy of straight lines into question.

Conflicts occur by proxy, through energy-hungry AI. In the wilds, digital creatures called *kolobok* preserve memories and proof of autonomy in the face of frequent climate shocks and interference from their larger, better-organized neighbours. Eco-state AI pursue new frontiers of efficiency and organization in service to sustaining the natural world on which their communities and their members rely. The few remaining corporations jostle amongst each other and send their AI deep to dig for data that might be converted over into something profitable or useful.

Most have little choice in the lives they lead. They are born to a place and scarcity and higher fences create strong incentives for them to stay. Access to other ways of knowing becomes critical. Human ingenuity is turned over to maintaining tenuous filaments of connection and creation across boundaries and bodies of water. Throughout, the planet expresses its resentment through heat, and storm, and the degradation of all that we have built or hope to build. The straight line of time has been bent. We are ice melting outward and the best we can do is shape the ground so that the melting waters harm as few as possible. Doing this alone, as you will see, is impossible.

# The Revolutionaries

Jamal, half-awake already, jumps to his feet at the sound of the ice cube unexpectedly slipping out of the aluminium box. The ice bounces about and almost immediately leaves traces of its melting on the ground. Jamal frantically grasps the ice, puts it on his forehead, and rubs it across his face. Sheepishly, he then puts it in his mouth. This will be his share of coldness for the day.

He leaves the building and checks on the radio towers. The structures they built at the border are still standing despite the absurd heat and the efforts of those on the other side. The facilities are built with a series of holes and vents on top to direct air and cool as much as possible. This was knowledge they already held. The structures themselves were built from blueprints recovered from a server half-way across the world and shared through the shreds of internet they had left.

Whether based on faith or on money or on preserving the natural world, the government remains corrupt. The quiet and relative lack of people is deceptive. Surveillance cameras outnumber human beings by ten to one. Everyday they go and spray paint the cameras, but the army comes back and repairs them, or they build cameras that fly, or dig, or swim. Some people thought the army would eventually finish them off, but they mostly stay inside their walls letting the weather and the machines do their work for them.

On the other side, more and more people get arrested every day and with limited communication infrastructure, raising awareness is challenging. Identification cards have been seized. They won't issue any new ones until Jamal and his crew choose to move inside. Without ID, Jamal can't access education, healthcare, or act on any of his rights. To the state, it's as if no one lives on this block anymore.

But they do live. And struggle. People have set up mesh networks that allow them to send text messages across the border to their families that might want to get out. There is a window of 30 minutes each day when they can access 2G internet. Each day at dusk, some unknowable magic interrupts the government's parasites on the systems. In that brief oasis of time, they connect to the satellites and send out short

messages and the names of those arrested inside. Nothing ever changes and most don't care, whether they be inside, on the land, or digging through the sand for more treasures. A crew inside collects and remembers the names. That is all they have left of their identity -their names and their ages.

Before the uprising and the unsuccessful revolution, Jamal was a performer. The revolution lasted too long. No one lost hope but it sometimes felt as if hope was all they had left. The sun is almost setting, and it is time for people to gather in their different mobile tents for the night across the mountains, to send the names to the people on the other side. They change positions constantly, so their positions remain uncertain. They are also uncertain if their efforts make much of a difference, but it has taken on the quality of ritual, of ceremony, for those lost and unnamed.

Jamal is headed to the tent where his two friends Bahman and Parto are staying. They have turned on their device and are struggling to find a signal. Bahman is moving the satellite dish with a practiced hand to find the sweet spot. Other tents are doing the same thing. There are five tents in their cluster and each tent has three people in it. One to sit behind the computer, another to move the satellite dish, and the third person to read out the names as soon as they are connected.

For the mission to succeed, they need to have all five tents connected to one another at the same time to provide the necessary power to break through. They have thirty minutes, just before the sun sets, to get it done. Some days they can't find the spot, but with the passage of time, they are getting better and better at it. They are adapting to these conditions. Fifteen minutes pass and no luck. Tents are in communication with each other using solar-powered flashlights. At the sixteenth's minute, Bahman hears the "Beep" and shouts, and the flashlights signal for the other tents to stop their adjustments.

Jamal starts reading out names and ages loudly. The communication is one way, so they are never sure if the voice is received on the other end. Across the border, when they hear their voice, they try to shoot a flare gun into the air as an indicator of the message being received. Thirty names are read out loud, but no flare is seen. The sun is almost set.

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Jamal finishes reading the names. No flare. They are out of time. They shut everything down and pack up the gear in all the tents before their location can be determined. They find out later that a tent across the mountain is being raided and people are taken. Their names are Soheila, Shahram, and Nooshin. Jamal repeats their names later that evening as he prepares for sleep.

Jamal adds those three names to the list for tomorrow. Back on his blanket in the slightly cooler night air, Jamal somehow finds sleep.

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You are the revolutionaries.

How did this scenario feel?

What culture would you build to respond to these conditions?

What would you do next?

# The Librarians

Many despise our ancestors for the harm they created and failed to acknowledge. While we might judge their inaction, we have also come to admire the wealth of culture and knowledge that they generated during their brief, fiery path through history. On a landscape augmented with fluid and adaptive digital layers, there remain remnants of a past when most of our digital lives existed on screens: flat surfaces that provided a portal to enter into representations of the real. Much of this data reserve was made to serve the perverse values of those times. Others, we remain unsure of.

The people who made these artefacts are no longer reachable, but their culture remains. Of the digital assets that are intact, some can still be interacted with, though this often involves simple combinations of raw data, moving images, or sound to accompany. These are records of how people communicated in an era of screens and their creators were prolific.

Some artefacts are theoretically usable, but we have yet to find a way to “open these files” as the software no longer exists. Some of them seem to be numeric representations of points in cartesian space. We could probably map them out with a bit of guessing. Some seem to be pointing to instructions on how to put real-life components together with a manufacturer, perhaps I can track these vintage machines down. Where would I find these real-life objects they’ve made? Will there be clues? I wonder if I have seen them in physical ruins alongside enormous containers of physical media recording such events as an early 20th-century shipwreck? Or maybe they can be found in some condemned heritage buildings, waiting to be demolished.

There are elements from these finds that are easier to work with; text, images, and chat histories. Sometimes I flip through them and listen to all the chats, imagining myself being a part of their conversations. The conversations point to places that no longer exist, cities from a long-standing empire that has since collapsed or monuments to gods or heroes that are now absorbed into new geopolitical mythologies. There are frequent references to a once democratic society overtaken by extremists, borders that were walled 40 some years ago now freed, towns built on permafrost emptied out during the “great meltdown”

We do know that ours is the first matriarchy for some time. Everything fell apart in such a short span of time. How much have we missed? What knowledge would be lost if we hadn’t encountered these digital artefacts. What were these people trying to do in the 2020s and even the times before? What happened before the “great meltdown” that overheated almost all centralised data centres? Somehow, digital fragments created in the before times survive, and now appear in our neighbourhood augmentations. What’s the point of me, sitting with the found artefacts that are long past their “best before” date?

Sometimes we come upon language that echoes in our time - references to gardeners, to harvests, to fermentation, and to pantry. These are ideas familiar to our parents, our grandparents, our great grandparents. The people who left these traces have also passed down this knowledge to us, despite the irresistible enticements of their times. Perhaps some did see it coming.

Theirs was a time of straight lines. We’ve evolved since our close encounter with a total biosphere collapse. We work again with the cycles of the Earth’s revolutions around the Sun, and the Moon’s revolutions around the Earth. However, these tools of straight lines that thrived in a time when humans nearly destroyed the Earth can now be reused to address the ills of our own time. Things move at a slower pace now that our energy is distributed, and data is stored in local landscape augmentations rather than in centralized data centres up north. We know where things are when they are not in the cloud. But we dig and seek patterns in the ways these scattered artifacts relate to each other. Perhaps I can continue telling these stories by piecing together what’s left. I wonder what forgotten stories I will discover from the fragments. I wonder if the people who left these fragments behind would consider me a worthy collaborator to continue telling their stories.

You are the librarians.

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# The Pioneers

*She walks down a street stained metal and enters a neighbourhood she once knew well. Bees spin and climb high against the windowless buildings.*

The server farms are endless and quiet. She no longer imagines a data double and its ramifications, a word once heavy with meaning and rebellion. And now, it sounds somewhat ridiculous given the reality mapped to these systems. If only just the body. The centralized servers once committed to mapping and predicting have been taken over by bees.

Now networks don't buzz as servers once did, they've slowed to the pace of a walk, and so interfaces and ways of living have changed. People can't afford to have frictionless push notifications, and yet we've adapted to receiving notifications whenever a mobile connection node is around. The slow move towards networked communities continues. Physical workflows collaborate with digital ones: both tangible networks and habitual ones entangle.

*The movements of the bees pull the woman back to her feet. She feels the mud squish under her shoes. She smells the damp, rich air.*

Setting up networks comes with friction, and this fiction is turned toward rituals of tending. A technology only runs with its technicians and now everyone is one of them. As communities they host servers, various satellites, any sort of node that would act as a dynamic or static point of digital data. There's more physical movement in our technology. Either moving from static to dynamic connection nodes to get large files exchanged or waiting for mobile ones to move past your area to have notifications received or sent out. But, people have built around this slowness of networks, and grown accustomed to patches being disturbed through the still unsettled climate.

*The damp air pulls stronger into her nostrils. The rain begins to fall.*

## The kolobok and the fox

"It's still raining" the boy yells from outside to his mother.

She leans over to look outside and grabs the box from under the table. The rain might mean flooding, which might mean the electricity fails, or the banking servers, or the health depot, or, damn, rain could mean any sort of collapse. Choosing what to seed isn't going to be easy.

"Up in the hills?" the woman asks of her son.

He shuffles about on the porch and then coming back to the window offers, "Nah, doesn't look like it".

She checks the seeding capacity and sees 40 units allocated to their modest household. This seems a lower number than warranted, but now isn't the time to debate with the local committee. The rain is coming.

Twelve units will cover the boy's health and education data and they are already local, so no transfer costs incurred. She ought to seed the family memories, but they are spread across a few centralized servers so unlikely to be totally wiped out. Deeds and claims will be another 10. Still ridiculous that the local authority won't seed deeds but she can't afford to lose those.

As the woman looks toward the ceiling in frustration at the impossibility of her task, a ping is heard, and she turns the box over to see what fresh hell she'll need to deal with.

"No fucking way" she mutters. The Khan family was seemingly incapable of shame.

Looking for 10 seeds, and for what? Their son is off to Friere, and it is just the two of them in there. No goats, no garden. Her finger hovers over the dial next to the orange light for a few

seconds before she pulls it away. Five. We can spare five. A flick and the transfer is complete. Now 23 seeds, and the rains increase.

“Jov, school or eggs?”, she asks her son in a half-joking, half-exhausted way.

“Eggs!”, he screams almost instantly.

“Surprise, surprise”, she mutters. Nonetheless, she pushes credits to seed the rights to their livestock and their DNA sequence should they be lost.

The small screen on the box is lighting up with other seeds from around the community. She doesn't care what folks choose to seed. She will do her part to preserve whatever aspects of their hard-scratch lives are worth keeping and they will do the same for theirs.

Apparently, a century or more prior, folks used to run on financial institutions when they worried about its ability to meet their financial obligations. Now there's a run on damn near everything any time the weirder and weirder weather suggests that a power station, or a server farm, or a government office might not be there the next morning.

She slides four credits into their meager possessions, ownership, and specifications locally preserved in case the house doesn't make it through or the manufacturer's already inadequate infrastructure fails, and their proof of persistent ownership disappears into the murky river waters.

She wonders if her decision to forego buying the kolobok will kill them this time. The kolobok can seed and unseed faster than she can think and will learn what matters to them by watching them. But the kolobok takes up ten credits on its own to seed and she'd heard of AI foxes that are infiltrating the kolobok and turning them over to other work, though that hasn't been proven as far as she knows.

Ten credits to their labour profile, of course, and then there are 9 remaining. What to seed? Maybe the rain would stop and none of the centralized server farms will be wiped. Maybe this is the end of it, and everything will be gone and all she'll be left with is what they were owed, her boy's future, their simple possessions, and the gratitude of the Khan's next door. The rain seems to be following along her train of

thought and increases in intensity. Her grandfather's paintings then, and the song they played at her wedding, and that one sad movie that still makes her smile, and all the books that Jov loves, and the special days that no amount of rain will wash away.

And the smiling face of her husband, gone six years, full of unwarranted optimism. Even in the rain.

And her own drawings? Her own compositions?

No, those she won't seed. She prays that the rain won't find them as she listens anxiously to the relentless wash on their steel roof.

You are the pioneers.

How did this scenario feel?

What culture would you build to respond to these conditions?

What would you do next?