

# Foreword

by RAOUL MARTINEZ

A trail of destruction lies behind our civilization. In its wake are lost languages and cultures, broken bodies and ecosystems. To retrace these steps is to glimpse an inconvenient truth: our society has been built on violence. It impoverished as it enriched, and unleashed chaos as it imposed order. The global distribution of power that we see today was born of slavery, colonialism, theft and war. The riches amassed are inextricable from the plunder and pollution of Earth's oceans, rivers, forests and soil. Through a strange alchemy, the finite wealth of nature has been destroyed in the production of abstract financial wealth. The value of ancient lands and human labor has been transformed into digits on screens that measure the fortunes of the privileged. The result is that 1 percent of the humans who woke up this morning own as much wealth as the other 99 percent combined.

Looking ahead, one thing is clear: the path we are on is coming to an end. Projections of the coming decades—whether they focus on food supplies, conflicts or weather patterns—read like dystopian fiction.

The world we create as individuals, communities and nations is a mirror in which we can glimpse something of ourselves. If a darker future is to be averted, more of us need to join the dots that link ideas to outcomes and values to violence. We need to make profound changes to our thoughts and behavior—changes that will cascade upward toward a transformation of the global systems that dominate our lives. For this transformation to occur, our interdependence needs to be widely recognized. The many boundaries

that divide us—psychological and physical—must be transcended. The emotional distance maintained by borders and bank balances, identities and iPhones needs to close. The crises we face demand that competition make way for cooperation, and isolation open up to connection. They demand that the stories we tell about ourselves—economic, cultural, political—be woven into the ever more intricate stories of nature, of which we are but a small part.

*The Memory We Could Be* is a remarkable contribution to this urgent project. The clarity of its ideas, the depth of its insights and the beauty of its language challenge and inspire. At its heart is a profound sensitivity to the suffering and wisdom of those whose voices are too often ignored. Daniel Macmillen Voskoboynik leads us beyond simple narratives and cold statistics to a nuanced, holistic understanding of the crises we face and the possible futures that lie ahead. I truly hope its message is heard and acted upon.

RAOUL MARTINEZ is the author of *Creating Freedom: Power, Control and the Fight for Our Future*.

CHAPTER 1

## THE MIGHT OF MEMORY

*We are born children of the earth.*

U'WA WERJAIN SHITA traditional authorities

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*To each epoch its own words.*

KAZAKH proverb

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*Water is taught by thirst.*

EMILY DICKINSON

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**W**E ARE MADE OF MEMORY. In our mother's womb, cells weave replicas of our parents' bodies: a heart, a brain, a knot-work of veins, a shelter of skin. The first breath we take, like those that will follow it, pulls particles of past into our chest: strands of oxygen and carbon that have traveled through the lungs and leaves of centuries.

We are born into a universe we will belong to, into a planet formed by billions of years, into an ancestry drawn by generations. Fortune finds us our family. As our umbilical cord is cut, we are bound to less visible cords that tie us to cultures, traditions and societies.

We start the uncertain journey of life. We grow. Our biological memory, the encoded stories of our genes, unfurls. We begin walking, on an Earth that holds the remains of our ancestors.

We acquire names for the world around us. We attempt to express our internal world through language, a memory of words and grammar.

With time, we build identities with the mortar of our childhood memories. We interact with fellow humans, who share virtually all of our genetic memory, exploring and exhibiting the remaining fraction that makes us who we are.

Rituals, songs and conversations subtly hand us the lessons of yesterday. The gaze we hold, the dreams we dream and the opinions we form are shaped by our surroundings.

As we age, new selves graft over the old. Memory, the tide of remembering and forgetting, retains and releases, defining us. And so we live our lives, carrying our unprecedented story, striving to write the memory we would like to be.



Nature is the memory of the Earth. Behind every forest, every valley, every body of water is a hidden history, a patient effort of time. Landscapes are carved by wind and water. Trees and plants are sculpted by the hands of altitude, precipitation and sunlight.

Time flows, and in its currents, existence leaves its mark. Trees etch rings, faces trace wrinkles, sediments fold layers and whales archive journeys in their baleen.<sup>1</sup>

Life passes itself on. Like seeds, our own societies disperse their memory. Farmers rely on our memory of agronomy to nourish life from soil. Educators and elders transmit human memory through stories, told and written. Lawyers interpret and apply juridical memory. Doctors examine patients, drawing lessons from our history of healing.

Scholars devote lakes of ink to documenting and explaining our evolving memory. Historians reconstruct the past, the imprint of human endeavor. Astronomers turn their telescopes to the skies, watching the delayed memory of stars arrive from light years away. Geologists trace the movement of mountains over millennia. Archaeologists brush away the sediments of time. The present releases memory, and journalists rush to record the latest events.

Together, in our own ways, we recall and rewrite the memory of human survival.



We all are because others are. Born of love, we begin as delicate beings in need of care. Our parents, our grandparents and our communities are the immediate forces that bring us into this world. Yet we are also the descendants of unknown predecessors, both human and nonhuman, that have come before us.

The Earth is only habitable for humans because of the minuscule organisms that breathed oxygen into our atmosphere millions of years ago. Our own life form today is the result of a persistent transition from cells into bacteria, from organisms into diverse species. The elements that compose us originate in the stars.

We are small strokes on the vast canvas of time. The Earth that sustains us is over four and a half billion years old. In comparison, our life as a species begins only 200,000 years ago. If the history of our planet were to be made into a two-hour film, human beings would only feature in the final second.<sup>2</sup> But that final fragile second holds an infinite sea of stories. Stories of loves and longings, of joys and sadnesses, of wishes and wonders. Stories about the creation and protection of life, and stories of its eradication.



Human beings cannot live without forgetting. Inhibiting memory is a bodily function. But, unlike our minds, the wider world does not forget.

The living memory of our planet narrates its state. Wherever we look, every sphere of life—our atmosphere, our biosphere, our hydrosphere, our lithosphere, our cryosphere—is marked by destruction.

Over recent centuries, a portion of humanity has radically disrupted the cycles of the planet's waters, soils and thermal balance. As a result, we have entered an age of ending, where we are extinguishing the conditions necessary for our own survival.

We are dismantling our own existential stage, setting in train a slow-motion genocide where crimes against humanity are obscured by their frequency. In doing so, we are wrecking our human heritage, shredding safety nets and condemning the world's most vulnerable to fates that defy transcription.

Seas are heating, rising and acidifying. Poles of ice are melting, experiencing the highest rates of warming on Earth. Ice sheets are increasingly losing mass. Glaciers, the water towers of valleys, are retreating. Our oceans, which hold most of the Earth's living space, are an exhibition of extinctions. The Great Barrier Reef, the planet's largest living structure, is in terminal decline, disintegrating in warming waters. Entire marine ecosystems are disappearing, with 90 percent of the world's fisheries collapsing or fully exploited.<sup>3</sup>

Our forests have been razed and despoiled. Half of the global tree population has been decimated, with 15 billion trees cut annually.<sup>4</sup> Entire mountains have been gutted, as mines stretch deeper scars into the Earth. Our intensive systems of agriculture have similarly carved exhaustion into the roots of land.

We are simply removing life faster than it creates itself. Every year, our relentless withdrawal of natural resources significantly surpasses the Earth's ability to regenerate those resources. Our degradation and erosion of lands overtake their ability to form and replenish fertile soil. Our production of waste outpaces the planet's ability to safely absorb that waste. We are overdrafting aquifers, overgrazing pastures, overcultivating soils and overloading our atmosphere.<sup>5</sup>

The pace of extraction shows little sign of ebbing. Instead, we are accelerating trends, hastening fertilizer consumption, water use, forest clearance and marine animal capture.

Our world's wealth is its diversity, but our assault on our own home is driving widespread extinction. The imposition of devastating development models has laid waste to thousands of cultures and ways of being. A human language becomes extinct at the rate of one per fortnight.<sup>6</sup> Cornered by deforestation, pollution and poaching, 100 species are being lost a day. The global population of fish, birds, mammals, reptiles and amphibians declined by 58 percent between 1970 and 2012.<sup>7</sup> In the next 30 years, 90 percent of all marine species may have been lost. By that time, there could be

more plastic in our oceans than fish.<sup>8</sup> Current rates of species extinction are hundreds of times greater than the geological norm, implying what scientists have called a “frightening assault on the foundations of human civilization.”<sup>9</sup>

Pollution has hidden the stars, poisoned our waters and ravished the lungs of our children. It has turned communities into cancer villages, city residents into smog refugees and billions of people into the living proof of a sanitary emergency. Around 92 percent of the world’s population is exposed to levels of air pollution above the World Health Organization’s guideline levels.<sup>10</sup> Half of New Delhi’s schoolchildren have permanent lung damage.<sup>11</sup> In 2015, pollution was responsible for over two and a half million deaths in India alone.<sup>12</sup>

Scientists note our breach of planetary boundaries, the key biophysical guardrails which allow for safe human life. We have already crossed, or are set to cross, a whole range of these limits: ocean acidification, biological diversity loss, the disruption of nitrogen and phosphorus cycles, disappearance of fresh water, changes in land cover, growing pollution from synthetic chemicals, ozone depletion, toxic chemical pollution and the loading of atmospheric aerosols.<sup>13</sup>

Today, we are seeing record rates of fossil-fuel burning, accompanied by significant rises in emissions. Our seas, skies, lands and winds are all in flux. Virtually every continent, region and country is indicating record or near-record levels of heat. Fires, ferocious storms, torrential rains and droughts are occurring with increasing frequency and intensity.

Of the hottest 17 years on record, 16 have occurred since 2000. In the past 40 years, the percentage of our planet affected by drought has doubled. Since 1970, the number of extreme weather events occurring every year has quadrupled.<sup>14</sup>

Weather records are being obliterated, but even the notion of a record makes little sense today. Under current trends and scenarios, the “new normal” may be a world where the barrier of expectation is always pushed further back, a horizon of pain in constant retreat.

Most governments, particularly the world's richest, are failing to meet their own meager pledges for action. The majority of global institutions find themselves with their backs to reality.

And the unrelenting pressures our environments are subjected to mirror those that pervade in human societies, defined by acute poverties, inequalities and avoidable deprivations. Through the atmospheric violence we have unleashed, we risk even further reinforcing these injustices. Ours is a world fertile for suffering.



These sorrowful realities, the silent signatures of centuries, are monuments to a crisis that evades its diagnosis. Climate change, rather than a root problem, is the salient symptom of a human world unwilling or unable to protect its own life.

Our ecological predicament is not an anomaly, a small setback on our treadmill of progress. It is not a mere outcome of an absence of leadership, education or technology.

Rather, it is a civilizational crisis. A crisis of our dominant thinking, which has for too long neglected what is needed to sustain existence, and a crisis of our economic model, which roots development in destruction.

Considering these discomfiting conclusions is not easy. Perhaps the prime impediment to understanding climate change is fear. A fear of pain. A fear of grief. A fear of implication and guilt. A fear of challenging our precious presumptions, and overturning our world-views. A fear of failure. A fear of losing comforts. A fear of violating the innocent dream that the world will be okay.

These fatal fears pull us toward apathy, toward denial, toward desolation, toward false hope. We avoid the topic. We adjust ourselves to its magnitude, assembling a psychology of faith. We rush impressions and opinions. We question the credibility of evidence, for its inferences are incredible. We nourish beliefs in happy endings, in imminent solutions, in technical fixes, in painless paths to safety. Thinking it is beyond us, we turn to apocalyptic dejection, often another shape of indifference.

And so, forced by fear, the topic of climate change sinks into silence. It gains the status of death, tainted by triviality and taboo.



The first step to overcoming fear is acknowledging its presence. By admitting our fears, we can start to transcend them and redirect their force. This book hopes to overpower the impotence climate change creates in us.

This fear is compounded by our ecological illiteracy. Our societies rarely, if ever, devote attention to examining the genesis, repercussions or stakes of environmental problems. Disoriented, we struggle to read our surrounding realities, to unpack blaring news stories or find the relevance in intangible alarm. Confusion, when coupled with perceived distance, can easily lend itself to callousness.

This book brings together the insights of many disciplines to try to clarify our ecological reality, and its possible trajectories. It starts by peering into the black box of our human past to understand how we got here.

It then proceeds to illustrate how climate violence is shaping our world today. The framing of environmental danger is often associated with the future. But our ecological crisis is not an abstraction we may hand to our grandchildren. It is not an advertisement, a warning or a hypothesis. It is contemporary, shatteringly and definitively so.

Finally, the book's closing chapters hope to sketch out the future, showing in human terms the world we can lose and the world we can win.

### **Authority and humility**

The world around us is astoundingly complex. Contemplating the infinite intricacy of the natural world, botanist Frank Egler observed that "ecosystems are not only more complex than we think but more complex than we can think."<sup>15</sup>

Reality escapes our simplifying control, defying explanation and measure. Our fragile formulae and delicate strands of insight

will always be outweighed by our endless ignorance. The world always knows more than we do.

Climate change is particularly vulnerable to the temptations of certainty. When we talk about planetary problems, it becomes easy to confuse the big picture with the only picture. It becomes tempting to reach for blanket explanations and swift diagnoses: that human nature is to blame; that not enough people know about climate change; that its implication won't be too grave; that human beings will always learn to adapt.

It becomes intuitive to forget who we mean by "we." Although climate change binds our fates as human beings, not everyone is equally responsible for it, and not everyone is equally affected.

It also becomes attractive to seek all the answers in one worldview. Depending on our inclination, we may see particular promise in technology, education or politics. But climate change is a wicked problem, resistant to single solutions, its roots woven into economies, cultures, livelihoods and habits. It traverses every sector of society and every level of human relations. Every perspective, from law to agronomy, medicine to oceanography, is relevant in addressing it.

In this book, I have tried to draw from as many different voices as possible—from anthropology to astrobiology, physics to economics, hydrology to history. I have relied on published scholars, but also on the world's thinkers without diplomas, its scientists without laboratories.

There are additional reasons for assembling this chorus of backgrounds. For too long, the dominant conversation on climate change has included only a tiny range of people, namely a handful of policymakers and valuable scientific sources. This selectivity sidelines the contributions of popular, personal, local and indigenous knowledges, which will be vital if we are to attain any plausible climate safety.<sup>16</sup> To tackle arguably the deepest problem we have ever faced, we are going to need to pull together our collective wisdom, in its plurality of lenses and expressions.

This exclusion not only restricts our gaze, but helps to misrepresent the gravity of the problem. Rarely are the protagonists of pain,

those most vulnerable to climate violence, near the spotlight of attention. Without their voices and visions, the story of our environmental reality is evacuated of urgency.

Over decades, the story of climate change has been predominantly encoded in the language of data, diagrams and jargon. It has been poorly illustrated through the narrow iconography of polar bears, collapsing glaciers and stylized temperature graphs. Its relevance has been defused through acronyms, abstract numbers and tired metaphors.

Our own imaginations suffer as a result, struggling to comprehend the emotional density of our unfolding disaster. In this book, I have tried, unsuccessfully, to compile existent narratives that distance themselves from technical and sanitized language. Our words ultimately convey the world. By diluting our vocabulary, we bleach the problem.

Finally, given the intricacy of the topic, I must also admit that the words that follow are written with hesitation. Often books will carry confident conclusions, their neat structures arranging orderly arguments that flow directly from point and point.

These pages, however, carry more questions than certainties. Every phrasing and assertion presented here is tentative. When faced with an impossibly intricate world, and crises that transcend their definition, there are few assured answers or absolutes. This book is just one small attempt to assemble perspectives and instruments that may assist us in the pursuit of greater literacy.

An old teacher of mine compared learning to walking through an endless corridor of veils. With every curtain we peel away, we find ourselves before another. The more we learn, the less we can generalize. In any text, there are inevitable tensions between concision and comprehensiveness. In advance, I apologize for all simplifications made and shortcuts taken.

While reading, it is always worth remembering that there is no single story about climate injustice. Our world is plural, just like its people. There are infinitely many ways to tell a tale; this is just one, the product of my restricted field of vision, ridden with all its

inevitable errors. I hope not to impose any totalizing narratives, or oversell any theories.

I mention this not merely as a disclaimer, but as a vital point. As I hope this book will show, if we want to accomplish any degree of climate safety, humility will need to gain prominence in our problem-solving strategies. After all, the word “humility” shares its root with the word “human”: of the *humus*, of the earth. To be grounded is to be attentive to our limitations, to be aware that all of us bear forms of myopia we cannot correct. Our horizons are not the edges of reality.

With this in mind, I want to be transparent about my own biases. I will not pretend to talk about climate change from some removed stance of impartiality. Much of how I think is shaped by what is sometimes called climate justice.

Climate justice is a small lens through which we can view the world. It asks us to be guided by justice, by a sensitivity to what is fair. It urges us to be attentive to history, to acknowledge wrongs that have been wrought and consider how to redress them. It encourages us to tackle the problem at its root, and ensure that by tackling climate change, we are building a more beautiful, equitable society.

For all its shortcomings, this is a way of thinking that also holds a few useful insights. Those most affected by climate change are those least likely to have caused it. Those most likely to have caused it are those most likely to avoid its negative effects. The brutality leveled at the nonhuman world runs parallel to the brutality of the human world. The inequalities that have generated our climate crisis are also those that inhibit our response. To overcome our ecological predicament, we need to transform the structures that have generated it.



The trends are terrifying, and every day we rush farther into uncharted territory. There are sadnesses we won't be able to avoid. But what seems certain is that human action over the next years will

determine whether we will face grave loss or catastrophic collapse. It is our responsibility to equip ourselves for these defining years. Learning to think ecologically is a precious and indispensable tool for our times. As José Lutzenberger noted: “ecology is the science of the symphony of life, it is the science of survival.”<sup>17</sup>

The fight to tackle climate change is a fight to determine the fatality of the future. A fight over the vindication of life. It will require much of us: to unlearn our despair and learn our possibilities. But through its rigors, we can win a more beautiful world. We can live and create the wanted memory of tomorrow.