

Think Like a Forest

Letters to
My Children
from a
Changing
Planet

Ben
Rawlence



VINTAGE

About the Author

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By the Same Author

Radio Congo: Signals of Hope from Africa's Deadliest War

City of Thorns: Nine Lives in the World's Largest Refugee Camp

The Treeline: The Last Forest and the Future of Life on Earth

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THINK LIKE A FOREST

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A Letter to the Reader

September 2025

Dear Reader,

The letters in this book (apart from this one) are not addressed to you. But I am sharing them in the hope that they speak to everyone who must live through and make sense of the extraordinary changes unfolding on our planet.

I found myself writing to my eldest daughter, Daphne, before she was born in 2013. And then I carried on. It was not a conscious decision at first. The letters appeared in my notebook alongside summaries of scientific facts about how the climate was changing and, at the same time, frustration at the lack of awareness of what was happening and the lack of action. Before I could speak to Daphne, I knew she would be coming into the world at a moment of profound challenge. I knew that her world would be very different from mine.

In some ways, this has always been the case between generations. But the scale of the change that is happening is immense, the break with our inherited environment, habitat, economy and culture is unprecedented. I couldn't wrap my head around it. I felt a desire to reach across the years, to prepare her for what seemed then, and is indeed turning out to be, a scary future, but also to capture something of the present that is disappearing. Humans are creatures of the Holocene and all the achievements of that era, but we have now left that stable climate of the last 10,000 years behind. Writing to my daughters (Cissy arrived in 2016) became a way to ease the frustration, the guilt, the loneliness of not yet being able to talk about these things fully with them. 'We mustn't scare the kids,' everyone always says.

By the time you read this my daughters may have read these letters, but they might not. I always imagined they would read them when they were old 'enough', perhaps eighteen or so, and they've still got a way to go at the

time of writing. But when *is* old enough to learn about the world as it is now – not the world that was, the one that I grew up in?

I don't know what I originally intended to achieve for them necessarily. If I'm honest, I think the process of writing these letters was more for me. I have collected together the scraps from my notebooks, edited them and expanded on parts in order to share them now in the hope that in my parenting journey, in my worries and fears and misadventures, my daughters and others (you!) may find something of use in our experiences, our struggles and the mistakes I've made as we've tried to navigate this perplexing moment in human history.

This strange moment, in the early twenty-first century, sometimes referred to as 'the great acceleration' or 'the polycrisis', has been defined by both a growing awareness of the trouble we are in and an apparent inability to do anything about it. Most of the world has grown accustomed to peace, to economic growth, to rising living standards and globalised communication while becoming increasingly habituated to the despoiling of ever larger areas of the natural world. Every day, it seems, brings more news about how our entire *way* of life is endangering *all* life. No one wants this to be the case. But, equally, no government or corporation seems at all inclined to really do anything about it. This leads to the uniqueness of our moment, an uncanny sense that we are on the deck of the *Titanic* looking at the iceberg while the elites are feasting below and the captain is asleep at the wheel.

This has been the backdrop to my introduction to parenting. And it is, I think, the defining and fundamental contradiction of parenting in the modern world: how do we cope with the fact that we are raising kids within a system that is killing all of us? Modern capitalism has delivered remarkable progress in technology, medicine and so on but it has also gone hand in hand with the unrestrained destruction and pollution of our habitat and life-support systems. The carbon dioxide in the atmosphere and the accompanying carbonic acid in the oceans are driving the mass extinction of much of life on earth, and, if the pollution doesn't stop, us too. The problem is existential. Raising children requires a sense of the future. What are we raising them for? What will they need to know? And parenting forces us to ask ourselves: how do we want to live and who do we want to be?

There is an epidemic of eco-anxiety among people of all generations. Children as young as four have shown they understand the concept of climate change and the destruction of nature and are worried about it. And yet, like sex or death, the climate and nature emergency can seem like a taboo subject. More than half of parents don't talk to their children at all about the climate and nature emergency. Of course, talking about it can be daunting. There are no easy answers. What's more, we probably would rather avoid facing the facts ourselves!

This book is not just for parents. We all experience these feelings and we all have the opportunity to talk to future generations, but parents of curious children can only dodge their questions for so long. We know very well now from psychology that avoided emotions don't go away but get submerged and express themselves in other ways. Research suggests that while adults are avoiding opening up conversations about climate change, children report being wary of raising the subject for fear of being dismissed or being seen to blame adults. The inter-generational nature of the crisis reinforces the barrier to talking about it. But, as a parent and as an educator, I can say with confidence: talking is what we need to do.

Children are being blithely advised to 'turn their anxiety into action', while teenagers and grandparents alike are being imprisoned for peaceful protest. At best this trite phrase is uninformed, at worst it is misleading and dangerous. This, along with the commonplace advice that it is children's duty to 'fix the planet', can leave children feeling that it is somehow their role to fight climate change because adults are not acting like adults and fixing it themselves. The only place to go from here is guilt. Meanwhile, most governments continue to promote and subsidise economies that are destroying nature, while peddling false hope and gaslighting us into believing that their meagre actions are meaningful. They are not.

But there is another path. If there is a thread in the story of my conversations with my children over the last ten years then it is this: experiencing the present through younger eyes, I have also come to see the world differently.

My daughters have taught me some foundational truths. The instinctive ethics of children are correct: many of our laws, behaviours and social norms are immoral and wrong. My children don't tell me this in so many words. They have shown me by example: through their wonder, through their care and empathy for trees, pets, birds and other wild creatures;

through their outrage and incredulity at the absurdity of things. On deforestation, plastic pollution, pesticides, sewage in rivers and seas and many other crimes against nature, they, rightly, just don't get it: 'Why is that allowed?' they ask while I try, and usually fail, to justify the status quo.

From very young, it became apparent that they saw themselves as one of many species living in our area. They viewed our garden, the street, the neighbours' pets and the nearby forest as their community, a community within which they had rights and responsibilities. They instinctively understood the biology and the ethics of the ecosystem.

An ecosystem like a forest is a community of species that are all in relationship to each other. The flower needs the pollinator, the tree needs the fungus, the fungus needs the soil, the mammals need the plants and the plant seeds need the mammals and the birds and so on, and they all need the sun, the wind and the rain for the whole to flourish. My daughters' instinct was to try and find their place within this web of relationships. What was the right thing to do with a frog found on the road? Who lives where? Who needs what? These were the species and places they missed and felt a belonging to when we went away. Our neighbourhood was not just the geography of their imagination, it was also a map of ethics. It was an alternative way of looking at and relating to the world. A way of thinking less like a single person and more like one species among many, a practice of thinking like a forest. It is a way of looking and relating that we have lost. But one that offers us a way ahead for living differently when this current moment of contradiction and uncertainty passes and when we once again come to realise the reality of how much our survival depends on other species.



CHAPTER 1

The night your name came

October 2013

Dear Daphne,

We've just decided to call you that. You are in your mum's tummy as she plays her viola in a concert. I am alone at home in Llanthony on the Welsh side of the border with England, the deep valley with high sides where we came to live a year ago. The same valley where Bruce Chatwin wrote *On the Black Hill*. The farm opposite is called 'The Vision', just like the one in the book.

The wind is up and the rain is at the windows like pebbles hurled from above. It's been raining solidly for several days and the stream that normally burbles quietly below our house at the bottom of the bank has become a torrent. It is a boiling, muddy brown race with sticks and froth and all the detritus of a Welsh farming valley. There's water everywhere. The road is a river. The field is a bog that is now so saturated that water is simply running in a sheet over the surface of the grass. Inside, the stone walls of the cottage are slick with condensation.

Everywhere I look out of the cottage and up the hill is water. But more than that it is the sound that is all-encompassing. The incessant rattle of the rain on the roof and the windows, the roar of the river that fills the valley and blocks out all other thoughts like a kind of malign white noise. For the second night in a row it has kept me awake at night. Sleepless, I was frustrated, even angry, but at what? But now it has unlocked the puzzle of your name and I am, instead, strangely grateful.

Ever since we knew you were going to be a girl, we've been stuck on a name. Some people know immediately the name they'd choose for their firstborn, some cultures have traditions for how it should be done – waiting

for a sign given by the infant, for example. But many people struggle for months with lists and arguments among the in-laws. We are in that camp. We tried out so many names but none of them felt right.

Then, last night, caught in the white noise of the river, the rain and the wind, I surrendered to the storm and went outside. It was as black as the nights can get here, not an electric light in sight. Just the raging of the river and the lashing of the rain. Instead of hurrying back inside I allowed myself to be drenched and went to the top of the bank where the noise was loudest – so loud it felt like standing next to a busy motorway – a wall of noise that doesn't allow you to think. It seemed alive, possessed. And as my thoughts cleared they coalesced around the concept of the spirit of the water – Daphnis, the water nymph. And as soon as the name popped into my head, I knew: it was as if the decision had been communicated to me, not a decision I had made. And almost as swiftly, I realised how wet and cold I was and turned tail inside.

This morning when I shared it with Mum on the phone she agreed immediately – there was no debate. The valley, or the universe perhaps, had named you. Some traditions bestow names for significant events occurring at the time of a newborn's arrival in the world. The water is your time.

The water is unusual. This is a 'once in a hundred years event', they say on the news. Just like the epic snow that hit the valley last year. The climate is going haywire; a new era is unfolding in which old certainties like the weather and the seasons are unravelling and this time, this era of flood and fire, will be the backdrop to your life, it will shape the world that you grow up in. So it's appropriate I guess that one of the elemental forces driving these changes should be encoded in your name.

I fear for you. I suspect this is normal. I'm sure all parents worry about their children and fear the uncertainty of the future. But this seems like a different order of magnitude. The changes under way, which we cannot stop, are so large and comprehensive that they are existential for all life on earth, including us, and you!

No one really knows how it's going to go, although we hear bold pronouncements all the time. Some people are deciding not to bring children into the world. An additional human – especially one born in an affluent country – carries a hefty carbon footprint, but there is also the fear that their life will not be worth living: that the suffering that is coming later in the twenty-first century will be too great. Obviously your mum and I

don't agree. We did discuss the ethics of child-rearing in some detail but no amount of cold rational argument could counter our love and the raw biology of our desire to reproduce. All life tends towards life. It is an irreducible part of what it means to be alive – let alone alive as a human. In some ways, having a child is an act of faith in the future, so it can be difficult if you can't find much to hope for in the present arrangement.

Some people frame the desire not to have children as a sacrifice. I think this gets close to the moral truth of it: the would-be parents are forgoing the joy and wonder of parenthood for the sake of a more general love of humanity and the planet. It seems to me, in both these pathways there is parenting – there is an act of love and care for the child not conceived just as much as for the one that is born.

Mum and I also considered the possibility that parenting could be a positive, even a radical act: what about all the good things, the impact that you might create in your lifetime? What higher contribution could we make to the next generation than to shape it?

That sounds a bit ridiculous now. Children should never bear the responsibility for cleaning up the mess of their ancestors. I also want to allow for the thought that things could go the other way – that you might teach us. Already, even as you are on the threshold of entering the world, the fact of your existence is changing me. It has changed not only my outlook, but also my body, my sense of time, space and risk. I feel a resonance in my core, not a weight but a depth, like a deep bass note against which I must tune the world. And that has led to new decisions: to fly less, to commit to living here in Wales, where Mum's family is from, and to try and find meaningful work that would be worthy of you. It's not me that's shaping you, but instead it is you that is shaping me, and you're not even here yet!

CHAPTER 2

A tale of two valleys

December 2013

Dear Daphne,

You are nearly here and Mum is losing her mind. The rain has not stopped. Higher up the valley, there has been a landslip. Half the road slid down a cliff. And downstream there are floods. We are trapped. Mum is panicking: what if you come now!? How will we get out? Will we have to call the farmer to deliver you like another of his lambs? Or will the air ambulance come and you be born in a helicopter? What's more, our landlord has just served us notice. This has sent Mum's blood pressure rising, further increasing the chance that you may arrive early. We are trapped in the valley and yet we must get out. The valley is all that we talk about; being in it, or getting out of it.

The high-sided hills have dominated our view for the past year and a half, and now the valley has come to shape our view of the world as well. It has left its mark on us and it won't let us go without a fight. I never could have imagined I would love this place so much. We moved with some trepidation at the isolation. It was an experiment, we told ourselves. We wanted to be near Mum's family, but not too close. Ang Ang and Auntie Sister were half an hour away. But even after a week, we knew. We would not be going back. As often when falling in love, you fall because the object of your affections has something to teach you. It was true with Africa when I first went as a teenager, it was true with Mum, and it was true with Wales.

After many years living and working in Africa, this Welsh valley was a far cry, and yet now, seeing the continuity between colonialism and development in both places, the connection and familiarity makes total sense. There was something of the underbelly in both places: they had both

contributed in hidden ways to the surface sheen of modern wealth and progress that is usually on display in large cities.

This is a story of two very different valleys: this one, the Llanthony Valley in Wales, and the Omo Valley in Ethiopia where I had been leading a team to try and stop the dispossession and displacement of the peoples that had lived there for at least 13,000 years.

In the African valley, the World Bank and the UK's Department for International Development were giving billions of dollars to the Ethiopian government for basic services (health and education mostly) to try and alleviate poverty there. The problem was that the Ethiopian government was only providing these services in designated new villages and then requiring the nomadic scattered populations in several regions of the country to move to the new villages in order to send their kids to school and receive immunisations at the clinics. Meanwhile, the government was building Africa's tallest hydroelectric dam upstream on the Omo river which would change the flow of the river. The seasonal flows of the river were the lifeblood of the indigenous populations of the valley who have practised flood-based agriculture, a bit like the peoples of the Nile, for millennia. Even worse, the Ethiopian government was then diverting the water to irrigate large tracts of the fertile valley which it had leased to a Saudi company to grow sugar cane and rice.

We gathered enough evidence of human rights abuses to force an internal World Bank investigation and eventually a judicial review in the UK that led to the cancellation of the aid programmes. But the damage had been done. This was 'development' as commonly understood in the industrial West: the taming of nature for commercial gain to provide power and calories for human use. But it was a disaster for the people, for the ecosystem, for any notion of democracy or human rights, and for Lake Turkana, downstream in Kenya, which is now slowly drying up.

Over the last year, while writing up the reports and talking on the phone to colleagues around the world who are working on the case, I have been looking out of the window at a bucolic rural Welsh scene: hedgerows, moorland, ancient fields and many, many ruined dwellings. Everyone in the valley speaks about the past – when more than twice as many people lived and worked here, when many diverse crops were grown, when there were orchards and vegetable plots and oats and a mill even – but the economics of mixed farming just do not add up anymore. The valley today is awash

with sheep, getting into everything, eating everything, including all the little saplings trying to grow on the hills year after year while the rivers run with dangerous concentrations of nitrate, phosphate and E. coli. I have come to realise this is not an ancient beautiful picture, but a crime scene. An environmental crime aided, abetted and funded by the EU's Common Agricultural Policy and the British government, all in the name of production. Nature, once again, has been subordinated to a narrow view of 'progress'.

Both stories have the same logic: a drive for food security for the masses that relies on impoverishing the ability of the valley to support the needs of the people who live there and then transporting the monocrop out of the valley on trucks powered by hydrocarbons to feed people in cities. The irony: that the pursuit of food security would lead to making the world more food insecure for future generations.

The story of these two valleys combined with your imminent arrival means that working to reduce the damage to our one precious planet is the only thing that makes sense to me now. It is as if I have become an adult for the second time. The human rights of people far away are still important to me, and social justice between the peoples of the world is a critical element of a faltering planet that will be unable to support as many humans as at present. But it is inextricably tied to environmental justice – to the over-exploitation of nature too. The extraction of value from people and nature are two sides of the same coin. The health of each relies on the other. But until I had been immersed in this place, I had not considered the importance of nature.

I was born in the UK, and I grew up on the flat, militarised downs of Salisbury Plain. Nature, such as it was, consisted of wheat fields and sheep. Wales, on the other hand, to me, was 'wild'. True nature, perhaps, the place where we went camping and hiking on family holidays. For most of my life up until now I could carry on disregarding my environmental impact safe in the knowledge that there was a place I could go to experience the wild. But now, living here within the Brecon Beacons National Park (now Bannau Brycheiniog) for a whole year and seeing it up close, it doesn't look in such great shape. Nor is it 'out there', a backdrop to our lives. It is instead something we are a part of and in relationship to. A relationship that we had better repair, and quick. Just as the people of the Omo Valley in Ethiopia fear, worship and speak to their environment and all the other creatures that

share it with them, so too, not very long ago, did the people living in this valley. What happened to that knowledge and that practice?

What would it mean to regain the feeling of belonging to a landscape and a place in a post-industrial country like the UK? I think Wales might provide some clues. The language and the landscape are still entwined, the culture of language and place is still alive, much closer to the surface of memory than in England. People still know the names of the hills, the rivers, the waterfalls even. Perhaps raising you here could be part of such a shift, to recapture those older rhythms and habits. Maybe these hills and valleys might claim you and in the process give you ancient eyes? I hope so.

CHAPTER 3

The past is a foreign country

April 2015

Dear Daughters,

Daphne, you have been in the world for nearly a year and a half now. Your name is proving more appropriate than ever. We moved from the valley to the other side of the Black Mountains – further into Wales. The majestic green curves that used to crowd our view of the sky now dominate the horizon to the south. I love the hills: my life, and you, are there.

But now I am in the Horn of Africa again on my final assignment here before giving up this part of my life. I don't know what I'm going to do next, but it will, I hope, involve more time with you. There have been incredible floods that have turned the red desert on the border between Somalia and Kenya into a treacherous mud bath. Donkey carts are navigating puddles up to their necks and a whole bus disappeared into a puddle that had become a lake. This is my last trip to the Dadaab refugee camp for the book I am writing, *City of Thorns*. I've had to travel a lot to do research for the book and I've missed you terribly while I've been away. The name 'Dadaab' means 'the rocky, hard place'. It is a very appropriate metaphor for the situation the refugees find themselves in, and for where we, as a species, now find ourselves on this earth.

I used to enjoy these trips. The excitement of going far away and doing something that felt important. It was here where I found out that you were on the way. I was on the phone to Mum in a heavily fortified compound of the United Nations Refugee Agency in the refugee camp, the world's largest, on the Kenyan border with Somalia. The camp is a sprawling makeshift city of hundreds of thousands of people from all over the Horn of Africa who have fled war and famine in Sudan, Ethiopia and Somalia. It

was wonderful, happy news, I wept. But it also made my work in the camp that much harder.

When I started this work, Dadaab was at the epicentre of a kidnapping spree that had seen aid workers taken from the camp, and journalists and shipping crews taken hostage on the Somali side of the border. The latest has been an attempted kidnapping of a car-load of Norwegian aid workers that resulted in a shootout and a hasty getaway.

Western journalists are now advised not to go to the camp at all, and if they do, not to stay for longer than thirty minutes. Armed guards and a police escort vehicle are mandatory. I am accustomed to being accompanied by three paramilitary police with AK-47s everywhere I go. But the worst is the roads. Driving to and from the fortified green zone every day is nerve-racking. The desert is criss-crossed with sandy tracks between the camps, the green zone and the various warehouses. The whole area is like a conurbation spread out over nearly forty square miles. Moving from one part of the camp to another you are plunged into what can seem like inhospitable desert out of sight of any man-made structure, alone with the camel thorns, scrub and tumbleweed. You could walk for days towards the flat horizon and not see a soul. Sometimes a family on the move, perched atop camels with precious yellow jerry cans strapped to the cargo animals, looms out of the dust and nods along their own invisible path, following some ancient nomadic route. It is on these lonely tracks that IEDs (improvised explosive devices) are unearthed on a weekly basis. The police compound is littered with the bent and mangled remains of police cars and several UN vehicles too – the wreckage of successful attacks. To even do the reporting I have been commissioned to do, I have had to arrange hugely expensive kidnap insurance.

‘Are you sure this is a good idea?’ Mum had asked before I left.

‘Is it worth it?’ is a question every journalist working in conflict zones must confront. At an event with a colleague who spent over a year being held hostage by Somali pirates, we discussed the question and concluded that it probably, almost always, wasn’t.

The war correspondent must have a peculiar disregard for their own safety in order to document the dangers faced by others. They must believe, even if only for the duration of the mission, that the work is urgent, necessary and worth it: that the risk of death or kidnap is worth the chance to show armchair consumers of news in relative security and affluence that

other people on opposite sides of the earth are, in fact, just like them. The point of conflict reporting is to affirm our common humanity and the value of all life, even if the price is our own.

The news that I was to be a father meant that my life was no longer mine to gamble with. An unborn person needed me. Suddenly, my professional conceit was gone and my judgement was clouded. Which road to take, how long to stay, what a fast-moving vehicle throwing up a plume of dust on the horizon might mean, all became much harder to read. I grew suspicious. I didn't know who to trust. I willed the work to end. And, after each week or month on assignment in the camp, I felt my body uncoil from the accumulated tension of being alert to every footstep, each snap of a twig or crackle on the radio.

Once again, it is here, in the refugee camp, that I found out that you're going to have a baby sister, Daphne, so now I am writing to you both.

This is happy news for us but the experience of raising you in beautiful, cool, green Wales while travelling regularly to the camp on the equator in the baking desert of Northern Kenya has been sobering. I've been telling the stories of people who live in the camp, some of whom have lived here their whole lives, without enough food and with little hope of going home to Somalia and Sudan. They are now my friends and they are eager to hear news of you, and see photos. We swap stories about our children. Several of the people I am writing about have kids the same age as you, and others are pregnant just like Mum. But they are hungry a lot of the time.

The United Nations World Food Programme doesn't have enough money and it has just cut the food rations in the camp by 50 per cent. I am doing my best to help the people I know but it is only a small gesture. There are 600,000 people in the camp and more coming every day. There has been a drought in Somalia for several years. The climate changed noticeably about a decade ago. It's common knowledge here, not controversial at all. Finally the rains came last month but with such force that crops were washed away and many people have been flooded out of their homes. Thousands are walking to the camp. Once they trekked through the dust of the desert. Now they struggle through the mud.

It is difficult to try and reconcile these two violently different experiences of parenthood. You are safe and well fed and my friends here are neither. I am living in two different worlds that cannot meet. 'If I hear the words "mothers in Somalia" one more time ...!' Mum has said more than once.

But all the same, I think there are some vital lessons in the experience of the camp for lives like ours lived far away. There are more similarities than might first appear. In some ways I think life in the camp could be a glimpse of the future for all of us. One which would make the past seem like a foreign country.

The residents of the camp cannot leave (except to go back to the drought, the floods and the war) and that is a terrible injustice. Some go mad with the longing, stuck in the past, a past that is, literally, a foreign country. Some tell themselves fairytales about going home or going to the United States for a new life. Many of the adults cannot accept their new reality and so struggle to adapt. But the kids take the world for granted: they race around the camp, play hide and seek, make toys out of things they find and do what kids always do: have fun. It is the only world they know.

There is a lesson here: the people who cope the best are the ones who can accept the present while hoping for a better future, usually beyond the camp. Paradoxically, this means putting so much energy into making life worthwhile in the meantime – with schools, hospitals, sports clubs, weddings, stories and so on. Hope is the precious commodity that fuels all this activity. And yet, the bleakness of the hungry, insecure, endless, confined present seems to offer very little hope at all. This is where I've learned a lot from the residents of the camp, a lesson that is useful for those of us struggling to find hope in less straitened circumstances. Hope is not an inert substance, like some precious metal, waiting to be discovered. Hope is something that must be painstakingly manufactured every day. In the camp, hope is not an object nor a subject. It is a verb. To survive here, you must be hoping *for* something, even if it is only a square meal. The residents are hoping *for* things: above all, for a better future, or a meaningful life. It is in the choosing and the channelling of energy that they are making this vital and precious commodity.

I met and wrote about one woman who went on birthstrike in the camp, who secretly took advantage of the contraceptives available to avoid getting pregnant. When her husband found out she shouted at him, 'I'm not going to give birth in this fucking refugee camp!' But many do. To raise kids in the camp is a peculiar bind: to prepare children for another future while living in the ruins of the present. This is something I think that our era of climate change will require of us too. The camp is broken and miserable. But it is the place where everyone lives!

Once upon a time (in pre-war-torn Somalia as well as in a pre-climate change Europe) parenting was about continuity, about the transmission of culture and a way of life. But what if that past, that culture, is out of reach? Or what if, even worse, that culture is sick? Like the ethno-feudalism that became corrupted and led to ethnic cleansing in Somalia, or the over-consumption of modern life that has led us over the cliff edge beyond the limits the planet can sustain? Wise parents and community associations in the camp are trying to interrupt harmful cultural legacies and build new habits of unity, democracy, empowerment for women and girls as well as ways of living that are future-proofed against the extremes of weather: controlled-conditions horticulture, solar-powered cooking, mobile modular shelters. The camp is a great experiment in adaptation.

When I get back to the UK, it seems as if society at large is living in the past and I am alone in the present. The dissonance of discontinuity is deafening. Climate change is not on the news at all, even as it is transforming Somalia and the rest of the Horn of Africa, alternating between baking and flooding the land, emptying it of people as the soil can no longer support human life. It is very unfair. Somalis have one of the lowest carbon footprints of any people on earth, they have done the very least to cause the crisis, but they are experiencing its effects first. When I come back, I often feel like a time traveller from the future. I feel like shouting at people locked into their phones or shopping in the high street, 'The planet you think you live on no longer exists!'

It's not just the past that feels foreign, but the present as well. On the other hand, knowing that large changes are under way and that the status quo cannot hold is kind of comforting. You are part of that future, part of what I am hoping for: another country that feels less dissonant, more acknowledging of the reality of our wounded planet as well as more aware of the inequities around the world that sustain the affluence of some. I'm not so naive to think that there won't be trauma and suffering in the world when you grow up but at least what I hope for you is the gift of the verb of hope. To know that you have the power to survive in any situation. To know that however bad things may seem, there will always be something to hope *for*.

CHAPTER 4

The mountains speak

January 2017

Dear Daughters,

The big book about the refugee camp is a year old, just like you, Cissy. I have had to travel a lot, being away from you in your first year. Your mum has had to manage on her own. I am so happy to be at home with you both and not having to go away. I want to stay here. But I don't know what to do. All my former careers – politics, journalism and human rights – have involved working in cities or in foreign countries. I want to be here, in Wales, with you.

The mountain above our house, 'my mountain' Daphne calls it, is named *Y Das* in Welsh, the haystack. It's the main route up onto the tops of the Black Mountains and it is very steep. I have been running up there a lot lately, looking for inspiration for another book and pondering the question: what is the right thing for me to do right now – by you, by myself and by the planet?

As I was descending Y Das on a crisp, cold morning, the sun was at my back and the rhythm of the run seemed to offer an answer, as if the mountains were giving me a clue, or a mission:

'Black Mountains, Black Mountain, Black Mountains, Black Mountain ...'

Black Mountain was an experimental college in the United States set up in the 1930s by renegade American academics and refugees from Bauhaus, a German art school that Hitler shut down as one of his first actions. The teachers from Bauhaus thought that the pursuit of industrial progress had privileged machines over humans. They thought the worship of machines and of 'progress' had led to the Great Depression, the violent

collectivisation in communist Russia, modern industrial alienation and the rise of fascism. The human dimension had been forgotten, they felt. And so Black Mountain was founded as a college based on values: to rediscover and unleash the human, and to resist Hitler and fascism, the existential challenge of the time.

What about a college here? I thought. A college for the twenty-first century, devoted to the existential challenge of our times – the climate and nature crisis? Studying at most universities in the UK is an urban experience. If we are to reimagine our relationship with nature and bring human activity back within the carrying capacity of the planet, what better place to study than *in* nature, in these hills, in the national park? An idea that you could say has been revealed to me by the mountains?

It would be a beacon, like the hills themselves, a place where people could come together to ask questions about the deep changes needed in our society if we are to regain our place in nature as a positive keystone species and not a parasitic one. It would blend practical future skills such as growing food, sustainable woodland management, agroecology and building with natural materials as well as the more theoretical, abstract challenges of politics and economics: to think about and demonstrate how to build alternative futures. It would also be, for me, an act of faith in the future. A practical step of something to hope for, that would also help others find what they wish to hope for too.

It sounds like a bold and mad idea, but now I have mentioned it to a few people, the idea has quite quickly taken on a life of its own. My friend Owen (Anwyn's dad) has agreed to give me a hand and see if we can get it off the ground. My New Year's resolution is to give the idea a year and see if it has legs. Or else, after that I'll have to find another job. I hope it might mean you can see more of me. In any case, I want you to know what I am trying to do and why. And, who knows, if it works, it might be a place you will want to study one day. It feels right, it feels as if I am in tune with the world – that I am not enacting my idea but rather responding to an invitation offered by your mountains.

CHAPTER 5

When will it be winter?

September 2018

Dear Daughters,

We don't have a big garden. It has a small square of lawn and a pond that Mum keeps telling me to fence off but which so far you've managed to avoid falling in. There are some small saplings I have planted: birch, Scots pine, the pear tree our old neighbours Frank and Binnie gave us when you were born, Daphne, and a Welsh Denbigh plum. On one side the stream runs mostly clear and the neighbours' trees throw their shade across it. Today we were making a scene out of leaves and twigs and plastic dinosaurs. The twigs were trees for the plastic figures and the grass was a jungle. You fashioned the leaves into a kind of shelter and a beetle made its way across the pitch, unfazed by the ranks of prehistoric creatures bearing down on it. For a moment you forgot the dinosaurs and assisted the beetle in its journey through the crowd. It clambered on the offered stick with its iridescent back and awkward limbs. When it paused to sense the air with its antennae you seemed to know to pause as well. Eventually the beetle continued on its way into the terra incognita of the flower bed and you returned your attention to the plastic dinosaurs. They often turn up in other parts of the garden or sometimes shredded in the bottom of the lawn mower. The sky was a perfect blue.

At the beginning of this year, our project to set up the college was awarded a grant for a feasibility study and business plan by the Brecon Beacons National Park. It's a brilliant grant: £84,000. However, we need to find match-funding. For most of this year I have been volunteering all my time to try and raise another £84,000. It's taken longer than the year I bargained for but we are not far off and it seems a shame to give up now.

It's quite a stressful and financially anxious time, but that's not what I'm writing about today.

Mum is away working and I am taking a break from the fundraising. When she is here, she is fully present and she sees more of you than I do. I look forward to her going away because it means I have to forget the stresses of work and prioritise you guys. Except I'm struggling to do that. So I'm writing to apologise and explain.

You were playing with the dinosaurs in the garden and Cissy was calling for my attention, 'Daddy, Daddy!', but I was lost in a reverie.

Daphne said, 'Daddy's having problems with his thoughts', and I could have cried.

She was exactly right. It would not be an exaggeration to say that I am finding parenting debilitating, depressing, an affliction even. There is too much information for my brain to process and make sense of. I cannot hold the whole equation together: the mind buckles. I read recently that parents of young children are the most likely to discount evidence of climate change or to deny that it is happening altogether and I can totally see why.

I spend each day full up, unable to tell you all that I want to tell you, to make you understand, to ask for forgiveness and to warn you of what you must prepare for. But you are only two and four. Perfect creatures of innocence, wonder and compassion.

A child's questions are always difficult. Daphne, you ask things like:

'Who put the stars there?'

'Why does the sun go down?'

But never before have a child's innocent questions become existential. The other day you asked about the seasons. It's autumn now but the leaves are still on the trees and the temperature is still like high summer. I explained the succession: spring, summer, autumn ...

'And when will it be winter?' you asked. The most natural question in the world for a four-year-old to ask. Yet I was broken by it, and flummoxed. I did not know what to say.

'Well, normally ...'

You think that the world is immutable – a system with its own laws and realities that you are finding your place within. But our ecological reality makes this a fiction. And it makes me angry that I am forced to be complicit in the fiction – because I cannot be completely honest with you. I raise you and answer your many questions on the assumption of permanence, even as

I know that the swallows on the mobile above your bed may be the only swallows you'll ever see or that the whale on your duvet cover most likely has a stomach knotted with plastic. I am not just a prisoner of time and circumstance, I am also robbed of language to describe it.

The names of things give me pause. The sea is no longer the sea. The sky is no longer the sky. They are chemically different, the balance of atoms in them is different from when I grew up and from the natural phenomena they once were for the people that named them so. The amount of carbon dioxide in the air you are breathing is 410 parts per million. When I was born it was 320. At 1,000 parts per million, it has been shown that human cognitive function is reduced by 21 per cent. Is that where we are heading?

All of this is so overwhelming, please forgive me for staring at the sky. I am finding that the challenge of this contradiction forces us to consider what we think parenting is at this point in history and I don't know what to do.

Historically, parenting was about reproduction – not just of life, but of ways of life. We have always passed knowledge and traditions from one generation to another. We learn the seasons, the sources of food, water and shelter and the songs and customs that go along with those traditions (even as modern urban living distances us from the land). Childhood is framed as education, as growing 'up', into a set of moral and ethical values about how to live well, how to tell right from wrong. The adults know the social and moral codes and it is the children's role to learn them. In this telling, we assume the world is largely 'known' and childhood is about coming to share in the knowledge about it, inheriting or reproducing a worldview. The cornerstone of modern childhood, and parenting, is, or has appeared to be, *continuity*. But climate change and biodiversity loss torpedo this assumption. The changes that are unfolding are not just about how the world is now, but about its trajectory and therefore our expectations and, crucially, our imagination: of what we think a life consists of.

There are many communities living now and in history who have had to come to terms with the total loss of their culture and livelihood. My friends in the refugee camp. Many of the original inhabitants of North and South America, Africa, and parts of Asia experienced holocausts of extinction at the hands of mostly European colonisers. And some living now in the Amazon and other areas experiencing violence and threats are having to navigate a similar loss. But for the Global North and for those chasing a

modern dream of affluence and progress in the rest of the world, such a rupture is very difficult to imagine and is hardly acknowledged. Peoples who have experienced peace and prosperity for more than one generation forget very easily the struggles that haunted former generations. They take security for granted. It can seem like a hard floor to build upon rather than a soft rug that can be so easily pulled out from under us.

So it's perhaps no surprise that war is often the frame of reference that people reach for. A common analogy for my generation in Europe is to compare climate change with the spectre of nuclear war – a diffuse threat that haunted politics and popular culture during the Cold War, from the 1950s to the 1990s. I grew up knowing all about fallout shelters and nuclear winter. There was a popular book by Raymond Briggs called *When the Wind Blows*, also adapted into a film. It told a simple story of a family taking shelter from a nuclear bomb. The drawings of the mum and dad could have been my mum and dad. The normality of it was terrifying. But nuclear war is an unhelpful comparison.

Climate change is not a possible threat like nuclear war; it is a certain but uncertainly timed unfolding of slow violence, destruction and loss. A fixed amount of future warming is already locked in and a horrifying amount of biodiversity is already lost. The proper analogy is that the missiles have already been launched: we just don't know the payload or how long they will take to arrive. The other difficulty with this comparison is that a singular nuclear event would be terminal. We (and especially you) will have to live through this slow violence for decades. Apocalyptic thinking is lazy. Adaptation is a given.

For you, born in the twenty-first century, the stable environment, habitat and definitions of the sea and sky that I grew up with are out of reach. Instead, what we must navigate together is *discontinuity*. This means not only is the world that you are coming to learn and describe different from how it was for me but the world itself is no longer a fixed and knowable thing (if it ever was) – it is a moving target. So many certainties are unravelled by this insight.

I cannot tell you this yet. Not yet! I never want to play a part in shattering the innocence you have now, I want it to last forever. I know it will fade all by itself anyway. But part of my role as a responsible parent in this day and age, I am coming to see, will be to help you make sense of that loss *in advance*. This is something that I am struggling to get my head around. The

job of a parent is not what I thought it was: that is to say, to prepare you for 'the world'. It is to prepare you for a very different world, a radically changing world; one marked by extinctions and cascading crises in human and other than human affairs. And not just to prepare you for the facts as they stand but also to help equip you with the ability to make sense of them and manage your emotions in response.

At the moment I see this as a bit like a kind of handbrake turn in history that will not be easy for any of us: you'll see an abundance of life, stable climates and a particular Global North view of opportunity with its semblance of equality and democracy disappearing in the rear-view mirror. You might feel disappointed in previous generations, in humans, in systems of oppression and extraction. And angry at them too. I am starting to cycle through all those emotions now just thinking about it ... this is impossible news. It seems very unfair that I will have to deliver it. But this is nothing compared to how terribly unfair it will feel to realise that the wondrous world you are coming to learn and love is slipping away even as you are getting to know it for the first time.

The injustice I feel on your behalf is a large part of what drives me in keeping going to set up the college. I hope the college will be a place where young (and old!) people can come and learn about what is happening to our world and come together to make sense of it and take steps to navigate the huge changes unfolding. At the moment worrying about these things seems like a very lonely endeavour. There are not that many of us who see things with the appropriate level of seriousness. Climate change and the crisis in nature are mostly seen as fringe concerns that are the preserve of worthy people who deny themselves worldly pleasures in order to 'save the planet'. But, soon, I think, and sooner than most realise, adapting to shortages of food and water and having debates about the sharing of scarce resources will come to be seen as normal.

Trapped in my fear and in my inability to explain these things in age-appropriate ways, I play along with the idea of permanence, for now. I pretend that this is how the world *is*, and do not challenge the implicit assumption that this is how it will always be. So we name and count the birds and the beetles and the bees even as I fear we are naming a museum. And I explain the calendar of the seasons as someone once explained them to me.

CHAPTER 6

And when is spring?

February 2019

Dear Daughters,

The weather is extraordinary. It's only February but we've been sunbathing on the lawn in temperatures of 20 degrees centigrade. Cissy, you have just turned three, and Daphne, you are five.

At the end of last year, we got a grant that took us over the finish line for the seed funding for the college. I'm here! I'm not travelling or looking for other work. I hired an experienced lady called Libby who has set up many colleges before and together we've opened up a little office in Talgarth above the mill. We have a lot of fun and drink a lot of coffee. Before the bypass cut a slice through the hill above the town, the mill was the centre of things – where the A479 trunk road used to make a dog-leg over the bridge past the Bridge End Inn on its way from Cardiff to North Wales. Pinned to the side of the building just below our office window is a hand-painted sign: 'Car Transporter Driver: DO NOT HIT THIS HOUSE.'

Libby can't stop buying you things. The latest is a string of cotton elephants with shiny sequins that hang from your ceiling and a children's book about growing vegetables: what to grow when. We've been looking at it today as we survey the garden and my overgrown raised beds. It's time to put potatoes in the ground. The soil is warm and moist to the touch. I encourage you both to look and put your hands in it but your attention is drawn elsewhere.

The growing season has started already, it seems. There are bees buzzing in the freshly opened daffodils. You both watch carefully as they flit from flower to flower. Creeping in their ungainly way down the trumpet, twisting and turning for a moment at the bottom of the flower, and then waddling

backwards until ‘whizz’ – they are off to the next one. You are captivated by the bees on their mission. I have to remind you not to try and catch them.

It will be another six weeks before you will come home, Daphne, with model daffodils cut out of tissue paper and ‘Happy Easter’ cards from the reception class at your primary school. Two weeks ago we were sledging down the hill behind our house! It must be confusing. I shouldn’t have been surprised when Daphne, you asked suddenly, seemingly out of nowhere, ‘When is spring?’

‘Well, it seems to have come early this year,’ I said and we laughed and smiled and enjoyed the weather but I don’t think I sounded convincing. My voice felt hollow and mealy-mouthed as it does when you know you are not telling the whole truth. I decided this time I would attempt an honest answer. I felt I must somehow speak the truth of the world as I see it. Is this not the entire basis of human communication, art and society – an attempt to answer the question, ‘Do you see what I see?’

The inadequacy of our language to capture the changes that are unfolding, and the simple fact that the historical concepts of spring, summer, autumn and winter already do not match your current experience, are things I feel I must address before the lie gets too long in the tooth and jeopardises our ability to speak the same language at all. Of course, this is my reflection later, writing to you this evening. At the time, this afternoon, I just took a deep breath and blurted out:

‘The seasons are getting scrambled with climate change. We are seeing hot summer days in spring and we are also seeing cold rainy days in the middle of summer sometimes too. Climate change does not mean that everything gets warmer but it means the traditional cycles of how things used to work are getting messed up.’

I watched as this information landed on your sun-dappled head and waited to see its impact. Where could I possibly go from here? The genie was out of the bottle. It’s fair to say, I was terrified by what I had just done. Your mother will be furious, I thought. When I spoke to my sisters this evening, both of whom have children the same age, one was supportive that I had tried to contextualise this for you. The other was horrified.

‘We mustn’t scare the kids!’ the prime minister of Australia, Scott Morrison, suggested recently, accusing parents and activists of scaremongering. I told Mum what I had done and she was practical about it: what do the professionals say? So I started researching climate psychology

and how to talk to kids about our changing planet and there were as many answers as you might have opinions on the subject. When is the right age? How much information to share?

But your response floored me, Daphne, and changed how I thought about the whole equation: your experience is not something parents can control.

‘Yes.’ You nodded gravely, your serious five-year-old face looking down at the ground. ‘I know.’

I was astonished, excited and sad all at once, but most of all, relieved. This was within your realm of experience: *it made sense* to you.

Suddenly, all my fears evaporated and new ones took their place. We connected. We were on the same page. Was I reading this right? Or was this just what I wanted to think?

I told you about the way that average temperatures are climbing – that frosts are far less frequent, that snow and rain are more extreme and heatwaves are more common now.

You nodded as though you understood. These are all things that you have personally experienced in your five short years on the earth.

‘Cissy doesn’t like the heat,’ you said as we made holes for the potatoes to go in. It’s true – she struggles. This could be a problem. Right now, though, she’s very happy digging in the mud and trying to catch the worms before they burrow back into the rich, moist soil.

Suddenly I’m no longer worried about your reaction to me telling you about the reality of the world as I see it. Instead I’m realising that your fresh take on the world may well be more up to date than mine. Unburdened with habit, expectation and rational thinking, you are probably seeing and sensing the world as it is more accurately than me. This could be huge! Who is learning from whom in this parenting business?

‘Cissy’s got a worm!’ you shrieked. Cissy indeed had a worm in her fist and watched with intent as it struggled in circles. She held it up for us to see and giggled. I looked away for a moment but was brought back by your voice, Daphne.

‘She’s eating it!’ It’s true, she was trying, but her chomping mouth struggled to land on the moving target and she ended up eating her hand instead.

For me, born in the 1970s, my understanding of the changing climate, the reality of it, is something I have had to come to terms with as an adult. The dawning realisation of what is happening has arrived in contrast to a prior

worldview. And that is tough. I've met people who struggle to accept the reality they are learning about: 'Why did nobody tell me this before?' is something I've heard more than once.

The sense of betrayal is understandable. It seems crazy, and unfair, when your worldview is snatched away. Us adults have to reconcile this new perspective with our prior experience: or at least what we thought our experience was telling us. But for you guys, now, climate change is not only part of your experience, it is your *only* experience. You have never known a world that was not warming or threatened. In some ways this could be easier to come to terms with – you are not being asked to relearn the world as adults must.

But you are experiencing the world as a very different place to the one your parents experienced. There is a gap here that gives me vertigo. It is hard enough to imagine what life is like for someone else. If the gap in experience and worldview is wide enough it can render books and stories about how the world works, or how it is, obsolete and confusing. It upsets the notion of shared experience over a lifetime. Statements such as 'when I grow up ...' or 'when I have kids ...' suddenly become conversation killers. Climate change makes the future not just problematic and difficult to think about individually; if we don't share the same perspective, it makes communication almost impossible.

Your one simple question has led to so many others. If we take discontinuity seriously, as we must, it turns our worldview upside down. This may not be a bad thing – it may be necessary.

CHAPTER 7

What do we want? Climate justice!

September 2019

Dear Daughters,

It's Thursday during term time but today you missed school, on purpose. Instead, with 100 other children and their parents, we trudged around Brecon in the rain. We carried placards and sang along with several million other people in 150 countries in solidarity with the global school strike movement that Greta Thunberg started last year. She first spoke to the United Nations when she was just fifteen years old. And last week she gave another incredible speech to world leaders in New York. She really shamed them:

This is all wrong. I shouldn't be up here. I should be back in school on the other side of the ocean. Yet you all come to us young people for hope? How dare you! You have stolen my dreams and my childhood with your empty words ... You are still not mature enough to tell it like it is. You are failing us. But the young people are starting to understand your betrayal. The eyes of all future generations are upon you. And if you choose to fail us, I say: we will never forgive you.

Earlier this year, your cousin joined the school strike for most of the summer term. He was only in the final year of primary school but he gets it. In our area no secondary schoolers joined in at all. We had a discussion about the best place for him to protest. Where do you go to call attention to the powers that be in Brecon? The council offices are on the way out of town and are only occupied occasionally. The district council of Brecknockshire was merged with four others to form the unitary authority

of Powys County Council a while ago. Powys County Council is located in Llandrindod Wells, half an hour's drive to the north, and your aunty is not going to drive him there. So, we figured the war memorial in the middle of town was best.

He cut a lonely figure, every Friday, sitting on the step with his hand-painted sign: 'School Strike for Climate'. I wonder if he is the youngest school striker in the UK? The head teacher was very supportive (unlike some), but I fear his message was lost on the bemused shoppers of Brecon. In general, people here don't seem that bothered. They watched our small band of kids and parents today with an expression of confusion. Extinction Rebellion claims that we don't need to convince everyone. Only 3 per cent of the population need to be mobilised and activated to force democratic change. That's what we're part of today and why we're on the streets. But I'm not so sure about the theory of change.

In 2003, I was working for the leader of the UK's Liberal Democrat party, Charles Kennedy, in the House of Commons. The Lib Dems were leading the opposition to the Iraq war to which Tony Blair had secretly committed Britain, alongside the US government. There was a huge protest in Hyde Park, London. People who had never joined a protest before in their life came from all over the country. Even the strongly conservative former military parents of my best friend joined the bus from our home town. We were outraged when, on the news, the Met Police estimated the turnout at below 1 million people. The organisers said over 2 million people had hit the streets. And that was just in London. Across the country, and indeed the world, there were protests trying to call a halt to the illegal war. I was in the crowd for a while but for Charles Kennedy's speech, which I had written, I was on the side of the stage looking out at a sea of faces. It was exhilarating and empowering: how could a democratically elected leader go against the wishes of such an enormous crowd? It was not just the numbers on the street. A majority in the polls were not supportive of military action. But Tony Blair was to give us a lesson in wielding power.

The prime minister went on television that evening to say that he respected the right of everyone to protest but that he still believed going to war was the 'right thing to do'. At that time, I thought I was losing my mind. I was spending every day writing briefing papers for my bosses, Charles Kennedy and Sir Menzies Campbell, setting out the case against the war, often updated hourly with new information from Hans Blix and the

United Nations weapons inspectors. And I was monitoring the news round the clock: my day would start at 6 a.m. listening to the BBC *Today* programme and end after midnight with *Yesterday in Parliament*. The case for war was so flimsy – Tony Blair had failed to win the argument and all he had to fall back on was his personal belief. Even his own ministers were not convinced but he bullied them into supporting him. Was a belief that something was ‘right’ really enough to commit a whole country to an illegal war? It hurt my brain.

The only minister with enough integrity and independence to see the truth and not be cowed was Robin Cook, who gave a spectacular speech in Parliament resigning from the government in order to vote against the decision to authorise military action. Cook was a friend of Sir Menzies, and we saw him before the vote, pale and shaking. It was to be the defining moment of his career. But even the loss of one of the most experienced and respected members of his Cabinet was not enough to deter Blair.

I learned through that experience that the politics of oil are hardwired into global economic and security arrangements: stable supplies of fossil fuels are the bedrock of economic growth for the US, Europe and China. The history of US military relationships in the Middle East, told movingly in Daniel Yergin’s 1990 book *The Prize*, bears this out. As does the fact that nearly half of global shipping is engaged in the transit of oil and gas: burning hydrocarbons in order to move hydrocarbons. Iraq had enormous reserves of oil that were not being exploited because Saddam Hussein was under sanctions for his previous invasion of Kuwait. Only a small amount of oil was coming to market through the so-called ‘oil-for-food’ programme. This was intolerable according to the neoconservatives in the US administration. So crucial did Bush and Blair think Iraqi oil to the security of their nations’ economies (and to the profits of their friends in the oil companies), they were willing to enact regime change to get it, and, in the case of Blair, to ride roughshod over the wishes of the general public. Twenty years on, the long-term aims are clear: the British oil company BP has, since 2011, extracted £15 billion worth of oil from the wells around Basra, the area that the British military were given to control.

So when we walked round Brecon in the rain with our placards, taking it in turns with the megaphone, I was remembering the physical sensation of that earlier protest. The familiar mixing of frustration and hope. My body being moved by the mass of people, the noise, the shouting, the emotion,

the solidarity. All the parents, and me among them, had children on their shoulders and you and your friends were clutching signs like ‘There is no planet B’, ‘Don’t be a fossil fool’ and ‘You’ll die of old age, we’ll die of climate change’, which were a little heartbreaking. The traffic stopped politely and old ladies stared at us curiously as we jangled along in high spirits, responding to the megaphone:

‘What do we want?’

‘Climate justice!’

‘When do we want it?’

‘Now!’

But my brain militated against the hope rising through my body. It was like an internal dialogue between two selves: one that knows the reality of the world, the other that wants to suspend disbelief and join the euphoric story.

‘I know how this ends. I hope I am wrong. Please let me be wrong.’

‘But I can’t shake what I know of the geopolitics of our world: the colossal amounts of money, pipelines, ships, ports and military hardware that are at stake.’

‘Still, please let me be wrong,’ I thought. ‘Let me just feel the joy of the moment: we are part of something.’

At the end we took a group photo with Cissy on my shoulders and everyone else clutching their homemade signs, with five-year-old Daphne by my side proudly holding up a sign saying ‘I love winter and trees’ and everyone grinning at the camera. The absurdity of relying on children, or worse, encouraging them to take responsibility for the predicament of the planet, is evident in that photo. How much power do they (or any of us) actually have in a system so rigged against us? Looking at that picture again this evening I felt bitter, and angry. Why are we smiling? Why are we not furious as hell? And why must a five-year-old hold such an abominable sign? This fact shames us all. You might feel something similar when you see the photos from this period. It will appear like a kind of bizarre interlude while politicians fiddled and the world burned.

But whether or not they will pay any attention to us is, I think, not the point. The experience of the body feeling buoyed up with the sense of the possible was just as important, if not more important, than the experience of the cynical head saying, ‘This will never work.’ It’s the exercise of solidarity that is so crucial to the manufacture of hope. We felt part of

something today. This, ultimately, is the one thing that a protest can achieve, even if, as often happens, it fails in its immediate political objective: today we felt other people shared our concern. We tried. And in doing so, we felt less alone. When you look at that photo in the future, remember that we are smiling in the picture not because we were naive or deluded but because we were happy.

CHAPTER 8

The next right thing

November 2019

Dear Daughters,

You might not like to be reminded of this, Daphne, but for the last few years it seems as though the single largest influence on your life to date has not been me or your mother or your friends or your cousins but a Disney movie. We have now watched *Frozen* more than ten times – or at least you have. I'm not sure how much attention I paid after the first three or four. But the whole family knows the songs, and, as is the case for millions of other families all over the world, the words 'Let it go ...!' are instantly recognisable.

You probably don't remember, but nearly every day you would insist on wearing the blue polyester dress with a gauze skirt that you called your 'Elsa dress'. Whatever else you might be persuaded to wear underneath, on top and visible must always be the Elsa dress. On the occasions we've managed to smuggle it into the washing machine and it hasn't dried overnight you've even been happy to wear it wet. But you do know that our family photo albums are full of pictures of you in this dress, chocolate ice cream all down its front, a raincoat stretched underneath it! And do you remember that the longest fit of crying to date was the family holiday in Cornwall where one cousin arrived wearing the famous plastic 'Elsa shoes'? In the end the shoes had to be confiscated from both of you to put an end to the keening that would erupt whenever they were spotted.

The first film was released before you were born. So for the whole of this time, for the whole of your life really, it seems as though we have been waiting for the sequel: *Frozen II*. It is finally here and today we went to see it.

I confess to being middle-aged and cynical about Disney movies. In their simple construction of a moral universe of good and evil they have often been criticised as pushing a storytelling agenda that supports a US view of the world divided into ‘goodies’ and ‘baddies’ (read communists and/or terrorists). And given that they have such power in their appeal to young minds, these elementary stories and plots could be said to have an outsize influence as ‘structuring stories’, helping to shape how we see the world.

Initially I thought the *Frozen* franchise was either ironic or tone deaf – a film about the world being turned to ice, and then a happy ending in which it all melts again, seems a bit close to the bone. But now I wonder if the creators are not too clever by half?

I was not hugely looking forward to *Frozen II*. But I was blown away. In my opinion it is one of the most relevant and powerful allegories of our present moment. A people reckoning with the inherited mistakes of previous generations channel the indigenous wisdom of the Northuldra (modelled on the Sámi people of Scandinavia, whom I visited last year as part of the research for my new book, *The Treeline*) to restore a proper balance between humans and nature, to the benefit of all. I tried to tell you about the reality of the Sámi experience and the faithfulness of the film to their worldview today but I don’t think it registered. This is the point, I think, about the power of story. It doesn’t work to be ‘explained’ in rational terms. It is more like a window through which you see the world.

And *Frozen II* is the perfect window. Here, in the plot and the morality of the story, were many of the precepts of the Sámi worldview that I discovered and wrote about: the civilisation of Arendelle was founded on a lie and that wrong must be righted for the contradictions to be unravelled and for people to be able to live in harmony with nature. Water has memory. The rocks can speak. The story of people is contained in the river of ice: the glacier that is the root of all life. Admittedly, we cannot reverse climate change in the way the movies imagine. But if we wanted to concoct a more powerful and appropriate ‘structuring story’ for how life should be ordered and what kinds of relationship we should forge with nature and with our own past, we could not have wished for anything more complete than a Hollywood film that captures these values in a blockbusting story.

Coming out of the movie theatre in Builth Wells into the cold, dark, rainy afternoon of a wet Mid Wales town, I was stupidly hopeful. Here was precisely the ethical framework to ‘keep looking after the forest’ that is

needed. This could be, I felt, the beginning of an awakening in mainstream culture to do things differently. And Black Mountains College might not be seen as a fringe activity but actually part of a general shift towards more ethical behaviour. The momentum seems to be with us. It feels as if we might be on the cusp of something big: another world might be possible. I know that we can't alter the general trajectory of warming, but we might be able to slow it down and we might be able to make the impacts less bad and more fairly borne. I was in tears at the end, and not just because the screenwriters wanted me to be.

CHAPTER 9

What about the ladybird?

December 2020

Dear Daughters,

For your whole life, the forest has always been there – a looming green wall at the bottom of the neighbours’ garden behind which the sun sets. Spires of spruce, an umbrella of sweet chestnut, platoons of straight larch trees all along the ridge, huge furry arms of western hemlock shading the road, and, towering sixty metres over everything else, the giant black poplars with their arms waving in the wind like football supporters when storms barrel up the valley.

The forest is part plantation and part ancient woodland. In the official classification it is called a ‘plantation on ancient woodland’. The word plantation means that it is not protected, even though in the whole upper section closer to the house there is almost no plantation crop, just an ancient jumble of chestnut, poplar, willow, larch, ash and hazel. All down the valley there are stone remains in among the trees: the ruins of a former mill, a forester’s cottage, some strange kind of earthworks that resemble a leat or an irrigation channel. Who knows what the former inhabitants of this place did or believed? But the wood feels like it holds some of the answers. You can feel closer to the earlier human inhabitants of the wood here amid their traces. This landscape, like all of Britain, has been lived in and shaped by humans since they followed the trees and the animals on the heels of the retreating glaciers at the end of the last ice age.

During the Covid-19 lockdown this year, in between finishing writing *The Treeline*, we explored the wood more than ever and played here most days. Along the bottom of the valley called Cwm Rhyd Ellyw the stream normally runs pretty clear over mossy boulders, one of which was a

frequent spot for playing ‘river café’ where you would arrange pebbles and pinecones into tea parties and invite slugs to participate. At another pool by a fallen poplar tree we used to often see a heron staring into the water, a place you called ‘Heron’s Pool’. The forest helped make lockdown a wondrous time for us – it was somewhere to go and play and pretend that the modern world and its madness did not exist.

But now that the lockdown restrictions have been lifted enough for the loggers to bring their machines up the hill, today all that was gone.

We walked down the road to survey what had happened after the loggers had been. For the first time in your short lives (you are six and four now) the hills beyond are visible: the foot of Mynydd Troed and the long arc and anvil of the Brecon Beacons with Pen y Fan. In the foreground was a muddy mess of deep caterpillar tracks flooded with rainwater so red it looked like blood. Below, the river too was a vivid carmine ribbon. Long strips of branches pushed into lines by the bulldozer ran perpendicular to the river and up the slope like ribs of a carcass. And the smell of death was in the air: trunks were piled high and the valley was heady with sap.

I shouldn’t have been surprised when you both burst into tears. It must have been a shock.

‘The trees must have been crying!’ you said, Daphne. An idea that is familiar to the First Nations peoples of Canada whom I visited last year as part of the research for *The Treeline*. I told you how the people there said they can hear the trees’ distress when they are cut down. That is why they always kneel before the tree and make an offering of tobacco before they fell one. They ask permission and forgiveness.

‘What if the mother ladybird came back and found that the tree where her nest was had been cut down? What about the babies?’

You asked a good question, Cissy, to which there is no ethical answer.

There followed other questions, all of which challenged my complacent acceptance of the landowner’s right to fell the wood: what about the oxygen that we rely on the trees to cycle? And what about the rain that the trees capture from the atmosphere? Daphne, you recently asked what I was writing about in my shed and I told you about *The Treeline* and the importance of forests. Now you are seeing these facts flagrantly disregarded in the destruction of the forest.

Your tears and your questions show, I think, that this was not just shock. It was not only your expectations that were being trashed here, but your

home. This was part of your habitat, and, since you saw yourselves as part of nature, necessarily entangled with it, it was part of you that was being destroyed: the violence was personal. The environment's capacity to support life was being harmed and thus its ability to support you. I hadn't seen it that way. But you were afraid, I think. And rightly so. You were not just asking about the ladybird but about yourselves: were you safe?

I tried to put the other side: the timber is useful, we need it; the landowner's grandfather planted the trees for pit props over 100 years ago; it was never a natural forest, it was always meant to be harvested; it's not ours, and so on. But you batted each lame excuse away: 'It's just money. The forest is much more valuable alive: if we allow all the trees in the world to be cut down, then what?' This was your final word, Daphne, and I can't improve on it.

You are more right than you know. (I later came to find out that only the conifers had any use as timber and the huge black poplars that came down with the rest were used only for woodchip in pellet boilers because the wood is too brittle for much else. Wood-pellet boilers that should, in all good conscience, be banned just like oil and gas boilers given what we know now.) Those black poplars were the grandfathers of the forest, towering over our horizon, home to so many redstarts, flycatchers, black caps, goshawks, owls, long-tailed tits and others. And those were just the birds, never mind the insects that the birds came calling for.

Our modern legal approach to natural resources, based on private property, extraction and profit, where a forest only has a size expressed in acres and tonnes and a value expressed in pounds and pence, is out of date. It has run its course. It is no longer useful. On the contrary, in its unrestrained state, it is dangerous. Private property rights were long ago unmoored from the older, more enduring ethics that we always knew were important. But now that gulf is ever more apparent. Meanwhile these older values that adults have forgotten are instinctively familiar to you. As American forester and philosopher Aldo Leopold wrote in the 1940s, 'A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.'

The forest should be preserved not just because it is more valuable alive, but because it is essential to all life and therefore sacred. For example, in the Roman era there was a crime of waste in a woodland or a common area: if you harvested coppice or bracken and did not use it, you could be fined.

And in the Sámi languages of northern Scandinavia which I learned last year, there is a concept of *birejupmi*, meaning ‘enough’. A bit like the North American seven generations doctrine, shared by the Iroquois and the Anishinaabe, it is an invitation to think about the generations that will come after you and how your decisions will affect their freedom of action. The Celts who lived here and formed the forts and field systems of this landscape had a rich tapestry of ethics around the forest that you want to know more about.

Daphne, you asked how long it would take for the forest to come back. When I explained that it would be at least seventy years until – according to the normal principles of clear-felling in the UK forestry regulations – the crop could be harvested again, but that many of the big trees like the poplars and the oaks were more than 100 years old, you both cried again. That the loss was permanent (to you) and that you would be old before it ever resembled what it was when you were young was too much to bear.

An interesting addendum to this episode that has surprised me ever since: you never accepted the crime of the felling of the forest. You always railed against it and even now when we go down the hill on bikes or in the car you will turn to each other and say, ‘Don’t look!’ Your moral outrage burns bright and doesn’t fade and I am proud of you.

CHAPTER 10

How was the climate when you were young?

December 2021

Dear Daughters,

We are in the Tatras Mountains in Slovakia and it's like we've gone back in time. There are little wooden chalets, immense pine forests, people skiing along narrow paths through waist-deep snow. The jagged peaks of the Tatras scratch the perfect blue sky and boulders in the river shoulder blankets of snow like scoops of ice cream. There is a quietness to deep snow in the forest that feels timeless and comforting. Even though the temperature is sub-zero, I imagine we could lie down in the quiet and be held warmly forever.

Grandpa moved to Prague in the Czech Republic twenty-five years ago and Slovakia is the half of the old Czechoslovakia that runs to the border with Ukraine. The mountains are jagged because they are young. They are a continuation of the fault line that runs from the Alps, through Austria before becoming the Carpathians down into Romania and the Black Sea. They are almost unique in Europe because of the way that the former socialist government preserved the national park. There are no dwellings, no agriculture, no roads within the park, unlike our own national park that we call home. What's more, for half the year, from November to June, the paths beyond the foothills and the ski slopes are closed to visitors. People respect the closed season – they're proud of it. And as a result, bears, lynx, eagles and a myriad of other animals that we've seen stuffed in the Tatras museum roam free over a huge expanse of land all along the Polish border. It is a great example of what a national park can look like.

For a week we've been having no screens, spending time with Grandpa and learning to ski. I do worry if this is an obsolete skill. Ski resorts across

Europe are in crisis. But I'm not hoping to encourage an affection in you for downhill skiing, more an appreciation of being in the mountains in winter and learning a different mode of transport that might be useful in our own hills someday, like the purists here who hike up the hill on skins and refuse to use the lifts.

The quantity of snow is amazing. I've never seen anything like it. The locals say it is uncommon to have this much snow before the New Year. It means you are having a particular experience of winter which I worry is not 'normal'. But what is normal anymore? I decided I was going to keep my mouth shut and just let you enjoy it. But then the subject came up anyway.

There were children skating on a frozen lake and you desperately wanted to have a go. You couldn't believe that people were doing this outside, on a lake. Back in Wales earlier this year, you went ice skating on an indoor rink in Cardiff. You zoomed round and round in circles to the very loud music and I tottered about dodging tiny speeding children and unstable dads. You loved it.

When we saw the kids on the lake, Grandpa recounted his stories of skating on frozen lakes in the UK when he was younger. He even owned a pair of ice skates but there was no point in passing them down to me since the rivers and lakes never froze enough when I was small. You paid close attention and nodded along to his story. Then, Daphne, you asked me a mind-blowing question that has changed how I think about climate change and how we talk about it.

'How was the climate when you were young?' you asked.

It was a question I had never truly considered, but one that will become ubiquitous in the future and will come to define, I think, how we relate to the inter-generational theft that is climate change. It was a profound challenge to how I had thought of my life up until that point.

Instead of thinking about climate change as something that was happening now, in an instant I was forced to recast my whole life as something that had happened against a backdrop of a warming world. Which is of course something that you will have to do, and which, in a less consequential way, Grandpa will also have to do too. It made total sense to think of it historically like this.

Of course, if you look at historical temperature records, global warming has been going on quietly in the background since the First World War. And the destruction of biodiversity and habitats has been keeping pace or even

outpacing the warming every step of the way. It made me acknowledge and internalise something that I had known at an abstract level but not embodied, despite knowing – and writing! – about the disconnect between my worldview and yours, and the loss of a fixed picture of the world. You forced me to realise that all my memories were contingent. They were rooted in a historical climatic moment. The world had never been a fixed and stable place for the fifty or so years of my life since 1974, it has been warming all my life, and my own story is part of that. The weather of my life was not random in the way that we commonly understand the word ‘weather’, but a trajectory, a pattern. All our lives are unfolding in the shadow of increasing warming and this is something that we have in common.

Grandpa talked about some very cold winters in the 1950s when the snow was on the ground for months. And he spoke about his own grandfather’s wooden skis that he took to the Alps, on the train, in winter.

I remembered frost as a common thing, the crunch on winter mornings and the scrape on the car windscreen. I wish I could properly communicate the excitement of cool summer evenings and cool summer mornings when I would tiptoe outside in bare feet on the dewy grass to place and then retrieve saucers of milk that we put out for the hedgehogs. This was a wonder of the 1980s: turning on a torch at night and seeing the little creature from the tales of Beatrix Potter, Mrs Tiggy-winkle, quickstepping out of the hedge and across the lawn, lured into the jeopardy of the open by the promise of the milk.

And I remembered snorkelling in the Indian Ocean in 1994 and being astonished at the colours of the fish and the coral, the wondrous delicate underwater world of the reef where octopuses and lobster were common. I could not believe that something like that existed. It was like a magical palace underwater, the colours so vivid they hurt the eyes. When I returned the following year, a marine heatwave had baked the whole reef white. It was so disorienting, at the time I could not understand it. I thought that I was remembering wrong, until someone explained what had happened in the intervening months.

The images came in a rush. I thought of ice climbing in North Wales over a decade ago – something that is only ever possible in rare circumstances. And I recalled the Norwegian philosopher Arne Næss writing about the North Sea in the 1960s, saying that the seashore was a desert compared to

the 1920s when he was a boy. I had thought of the reef, the ice, the North Sea as places. But this was wrong. These are all no longer memories of places in the proper sense. They are moments. Of course, our geological, ecological and temporal niche on this planet is and always has been dynamic – we forget that fact at our peril. But now a lifetime can last longer than an ecosystem. The places we remember may no longer exist out there. But we contain all these places, these memories of moments, within us.

Your question is so important and so helpful: it puts everyone in the same boat. We all have a story to tell if only we can see it. Finding that alternative personal story can be the key to unlocking a different way of looking at the future: one in which we accept that the disaster we so often think awaits us in the future has in fact already happened in the past. It is both very simple and yet utterly profound: ‘How was the climate when you were young?’

CHAPTER 11

Bombs overhead, landmines underground

February 2022

Dear Daughters,

My tree book is out and Russia has just launched its full-scale invasion of Ukraine. Everyone is a little bit shocked. The talk of war has unsettled you. It is hard to imagine bombs and guns just over the border from where we went on holiday in Slovakia when we are in the sunshine at home in Wales. Ukraine is only a three-hour drive from where we were last month. We fancied we could see it in the distance on a clear day from the Tatras Mountains.

The snowdrops are out all along the riverbank in a glorious burst of white. After a whole month of storms, storms with names that make them familiar, like people (Dudley, Eunice and Franklin), the blaze of white has arrived suddenly, almost violently, all at once. Their arrival is always a surprise. And their abundance is always overwhelming. They are everywhere in the garden as if a guerrilla mole had planted hundreds of tiny bulbs – or landmines – underground.

It doesn't make everything better, but it helps. Their flowering shifts every year based on the temperature and the rainfall. Last year, I seem to remember they were out at Christmas. This year is more in keeping with the old order of things. And it helps knowing that they will always be there, under the ground, waiting to erupt in a carpet of snow to take our breath away and to take our minds away from whatever horrors are currently on the news.

'Are they actually made of snow?' you asked, Cissy.

'Yes,' I say. 'Go and make a snowball!'

And off you both run to kneel down by the rushing stream and examine the tripartite bells nodding on their slender green stalks with the tiny trumpet inside, each of its three sides streaked with four veins of green leading to the heart.

‘Liar!’ shouts Daphne, coming back and raining punches at me playfully, and we all laugh.

Whenever I see snowdrops from now on, I will think of Ukraine, and you, and of all that furred, sleeping beauty locked in the bulbs underground, biding their time.

CHAPTER 12

Spying on the neighbours

March 2022

Dear Daughters,

I have to write down this morning's experience since it was so unique and unexpected; it felt so unreal as to be an apparition. If superstition were still a thing, I suspect it would be named an omen.

You are in the habit of waking up early and I am in the habit of being woken up early too, to play with you. Mum likes her sleep and we all know not to go into her room until she herself decides to come out of it ... And yet this morning we were all awake in the early hours. It was a clear dawn, the glow of the sun not yet reaching over the shoulder of the hill, and so our little dingle, as they call a small fold of a valley in the Marches, was still threaded with mist and crusted with frost under the palest of pale-blue skies.

And then, for some strange reason, we all found ourselves in the bathroom wondering about the racket that the sparrows were making in the neighbours' garden. Wiping the condensation off the windows and peeking out we all drew a collective breath and watched in wonder.

The sparrows were circling like a swarm of bees around the head of a very large tawny owl. The owl was sitting on the gable end of the neighbours' barn, facing us across the garden, not twenty metres away. She was impassive, eyes darting this way and that, perhaps making up her mind about whether to proceed with snatching a sparrow at that point. The owl just sat there. She saw us, no doubt about it. And while she sat there, a badger snuffled across the lawn of the neighbours' garden leaving little dark prints in the frost and tracing a thin wiggling line with its tail. Then just as the badger had departed into the hedge and we had gasped and absorbed that image of wild animals all at once, a fox followed in the badger's

footsteps, looked up at the owl and the commotion of the sparrows, and carried on, across the scene and into the hedge as well.

Clover, our cat, hopped onto the wall once the fox had gone, mesmerised by the whirling birds. And we sat, frozen, watching the owl sitting there, until, with a shriek, she took off over our house back to the hollow in the tree where she sleeps in the daytime, and the sparrows suddenly went quiet.

We all looked at each other and said ‘wow’ at the same time. What did it mean? Was it just luck? It was as if we were interlopers in the neighbourhood and we had had a glimpse of the wild society of the valley that existed above and beyond and without us. This was the more-than-human world and it was powerful and busy. It was right there, alongside us, whenever we had the luck to see it, or the patience to look.

CHAPTER 13

Fairy castles

June 2022

Dear Daughters,

Telling stories is an ancient human practice. It's what parents have always done. Stories help to make sense of the world. They can hold us. They can open doors for our imagination. They can function like a map.

This week, I've been running a workshop at the college called 'A New Story' which borrows its title from a book by the philosopher Charles Eisenstein called *Climate: A New Story*. Eisenstein was among the first to suggest that climate change is an opportunity to press the reset button on how we think of ourselves as a species and how we act in the world. It is, in a sense, the ending of one story we thought we knew about human evolution and civilisation and an invitation to start telling a new one. That's the essence of the workshop this week: an attempt to interrupt our most deeply held habits and assumptions. But we are not doing it through sitting around and talking. We are putting our bodies into new and unexpected arrangements and trying to connect different senses to each other. We did a movement exercise walking with our eyes closed. We did a collective sculpture session, making things from clay – building structures on top of other peoples' structures. And I led a walk up the hill and we stopped by the 'fairy castles' – or at least that's your name for them – and two worlds collided: your world and my professional world.

I was speaking about the treeline, about the lack of trees on the Welsh hills, and inviting people to look out over the landscape at the beautiful rolling countryside of the Welsh marches, the patchwork of fields and the shadows of the clouds sliding over the scene. It was beautiful, but, as someone pointed out, it was also a crime scene of poisonous pesticides and

chemicals, of deforestation and overgrazing. We tried hard to hold the two things in our minds at the same time. And then we looked at the fairy castles – the little thorny, knobbled nests of branches and roots about one foot high that you delight in examining. They look like the mossy furred homes of a race of tiny people. They are gorgeous and inviting and strange. But they only exist because every year when these stumps of hawthorn trees try and send out their shoots, the sheep eat the tips and thus stunt the trees keeping them low to the ground. Some of these stumps could be hundreds of years old. I looked up and saw the hillside afresh as if for the first time: there they were, hundreds of fairy castles all along the hillside. We were standing in a hawthorn wood that graced the side of the mountain, but it was a ghost wood, a woodland in waiting, biding its time for the sheep to give the trees a break. But if the woodland took off, what would happen to the fairies, to the inhabitants of the mossy metropolis?

There was delight and wonder in the ruins of the ghost woodland for you, as much as there was delight and wonder at the woodland that could be for the adults at the college. We can, indeed we must, love and celebrate what is and what could be both at the same time. That is the essence of weaving a new story even as we slough off the skin of the old.

CHAPTER 14

The squid and the whale

June 2022

Dear Daughters,

I've been telling you stories since before you could talk. We started with picture books: *Goodnight Moon*, *Peter Rabbit*, and then the newer additions to the canon, *We're Going on a Bear Hunt* and *The Gruffalo* and other adventures by Julia Donaldson and Axel Scheffler.

I can't remember when we started our recurring shaggy dog story called 'The Squid and the Whale', but I think it was around the time that we read Julia Donaldson's great book *The Snail and the Whale*. A snail hitches a ride on a whale around the world. They travel around an ocean richly populated with sea creatures of all kinds: turtles, sea anemones, coral and fish. The whale is healthy. This is as it should be – it's a children's book after all. The fantasy of the story in the book, however, was in direct contradiction to other stories you were exposed to on children's TV and in the *National Geographic Kids* magazine that you subscribe to. Whales and the oceans in general are under threat, you knew.

'Where's the plastic?' Daphne quipped once at the original. The pictures in the book were not accurate as you saw it, although to be fair to Julia Donaldson, in 2003 these issues were not as widely understood as they are just twenty years later. You also wanted to know, 'Is the whale going extinct?'

'Not at the moment,' I explained, and I was able to tell the good-news story of the end of industrial whaling and the fact that whale populations have begun to recover in recent decades. And also that this was a story about one particular whale who was, at it happened, doing fine.

Instead of learning how the world *is*, your generation must make sense of a world that is in the process of being radically transformed. Your experience of the world, the news and what you are being taught at school and reading in books does not yet align. ‘Is it going extinct?’ is usually the first question you ask now whenever you learn about a new creature. Yours is a tragic but perfectly accurate assumption to make, and a good question to ask. And it means that your more accurate grasp of reality makes encounters with outdated adult assumptions of how the world used to be problematic and confusing.

Our received (adult) ideas about what an intact forest or ocean or ecosystem is or was under a previously stable climate sit uneasily with what you know about the unceasing and inexorable rise in carbon pollution, deforestation and over-exploitation of nature on land and at sea. For adults it is hard to understand and accept that the forests and oceans that we knew and learned about – whose inhabitants and rules (their lifeways) we perhaps studied in school – are being scrambled. The word ‘ocean’ no longer means what it once meant – the sea is chemically and biologically different now, as well as being over 1 degree centigrade warmer and with a fraction of the marine life it used to have when it was given its name. Its patterns and functions are in chaos. The old stories are running out of rope, so to speak: you need new ones.

And so the story that started out as just a way to get you to sleep and share a bit about the ocean has become a way for me to help test out some alternatives. It’s a sideways look at things with all the get-out-of-jail tricks of storytelling that allow us to escape reality and grapple with our moment in a mythological way. Our two heroes, the squid and the whale, travel forwards and back in time and on occasion alter the course of history, they learn from mistakes, and they can shape-shift into humans and communicate with the more intelligent ones, or at least the ones that know how to ‘talk’ to animals.

The other day at bedtime Cissy said, ‘I wish I was born either before or after climate change.’ I was crushed. You’re only six! And yet the period of your life is already a source of regret. I wished that for you too at that moment. I wished so much that things were different. I didn’t know what to say. So I told you this story:

Once upon a time there was a squid and a whale. They were swimming near Greenland and inside an iceberg they saw an amazing sight: a creature frozen in the ice. It was hairy and huge with long tusks. As the ice slowly melted, other animals gathered around to witness the strange phenomenon. When the fur of the creature first touched the water the body of the animal gave a jolt like it was waking up. Then the ice cracked, the animal stretched its legs and opened its eyes. The watching creatures were terrified. The water rushed in and its fur got wet. It closed its eyes and went still. It had been frozen for thousands of years and had lived for a moment once again, before expiring. Then, as the body became detached from the rest of the ice, it slowly sank down into the dark deeps of the Greenland sea.

'What was THAT?!' asked the squid and the whale. Most of the other fish looked bemused. But a very old Greenland shark who had been around for over 400 years glided by and said:

'I heard stories about those creatures, they are called mammoths. Once upon a time there were many, but they went extinct. The humans hunted them.'

'They're amazing,' said the squid. 'Can we bring them back?'

'Let's try,' said the whale. And our friends travelled back in time, 10,000 years, to the end of the last ice age. From the coast they could see herds of mammoths grazing along the shoreline and humans with spears stalking them.

In the sea, they saw humans in boats made of wood and animal skins, hunting whales and seals and sturgeon in the estuaries as well. The squid lay in wait and shot out a tentacle and grabbed one of them from its boat. The others gave chase but the squid placed the human in the whale's mouth and the whale swam away. When they were safe from the humans, the squid retrieved the human and our friends interrogated it.

'Why do you hunt all these creatures?' they asked the human.

'Food,' it said.

'And how do you make sure there is enough? So that you don't kill them all?'

'We respect the animals: we are also the animals. We all belong to a clan – wolf clan, whale clan, salmon clan, reindeer clan – that

is protected by the animal and the clan also protects the animal. For example, I am from salmon clan. I cannot eat salmon, and it is my job to protect the salmon and its habitat, because I am salmon.'

'Ahhh, good,' said the whale.

'And this one?' said the squid, pointing with a tentacle to the mammoth.

'That one does not have a clan.'

'Why not?' said the squid. 'Who will protect it?'

'The other animals fear it, so we fear it too,' said the human.

'You are mistaken,' said the squid. 'If you want us to let you live, go back to your people and baptise the first child that is born into a new clan: mammoth clan.'

'Do you promise?' asked the whale.

'I promise,' said the human.

'Otherwise, we will call on the other animals of the clans and you will see!'

'I promise.'

And the human went back to its people and did as it was told. And there grew up another strong clan, the mammoth clan. And when the squid and the whale travelled forwards in time, back to the future, there were mammoths on the shoreline, just as there were whales in the sea and sturgeon in the rivers. The human had kept its word.

CHAPTER 15

A little knowledge can be a dangerous thing

July 2022

Dear Daphne,

Oh dear. We all know the internet is a source of misinformation – your mum and I have been vigilant about screen time and trying to make sure you don't go down strange rabbit holes on YouTube. But I hadn't counted on having to correct your friends. There is such a lack of understanding out there! I had perceived the danger as not talking about the elephant in the room. But there is another risk too: a little knowledge can be a dangerous thing.

Last night, we had had our stories and the lights were out but you were still tossing and turning and in the end I went in and asked what the matter was.

'Ioan says that when the North Pole melts, all of Wales will be underwater. Are we going to be OK?'

'No,' I said, 'the North Pole is made up of frozen sea – if it melts it won't make any difference.' I told you that the ice on Greenland and Antarctica will raise sea levels if it all melts. But that's not going to happen for a long time yet. I said that some areas of Wales like Newport and Cardiff will be affected this century but that we're on a hill 300 metres above sea level here.

'And Dai said, if people keep cutting the Amazon rainforest down, we will run out of air to breathe. Is that true?'

I was able to knock that on the head too. I explained that trees don't make oxygen as such, they cycle it; that the amount of oxygen in the atmosphere is immense and will not change very much as a result of global warming or deforestation. Deforestation is bad for other reasons: we need that oxygen

cycling to soak up human emissions and we need the forest as a habitat for the animals. But no sooner had we dealt with that one than you offered another.

‘Rosie says when she grows up she wants to kill all the humans because they are destroying nature.’

Rosie was clearly a smart girl who had assimilated what she heard and come to some horrible conclusions.

‘Not all humans!’ I said. ‘Some are on nature’s side.’ And I told you stories of humans working hard to protect nature and of many living alongside and with it too. I gave you examples of indigenous lifeways that are respectful of nature, that promote balance.

We talked of the Celts and the old Welsh systems of mixed farming that used the forest, the mountain and the meadow in rotation – that promoted biodiversity in order to harvest it. But it must be hard to imagine that such relationships are possible when you live in a world defined by fossil fuels and over-consumption.

We are weaning you on to unsustainable diets, training you to like processed food, bananas, oranges and chocolate, not the seasonal vegetables that grow here in Wales. We are dressing you in polyester clothes, albeit second-hand ones, and we measure distances in how long it takes to drive somewhere, not how long it takes to walk or cycle. The author Daniel Yergin wrote (in 1990 no less) that the fossil fuel industry had made us into ‘hydrocarbon man’ and our society a hydrocarbon one. It is an economy that (mostly) relies on destroying nature to create value or at the very least ignoring the costs that are placed on nature. The system is pushing whole ecosystems to the brink, leading to a new category of death and a possible new crime – ‘ecocide’ – the destruction of an ecosystem.

The contradictions of living in an ecocidal economy must be very obvious to young minds: one that normalises the use of fossil fuels for transport, domestic heating and cooking, vast amounts of plastic, air and water pollution and waste. I’m not surprised Rosie has come to the conclusions she has. But the work of balancing that critique with the positive potential humans have is tough! It doesn’t have to be this way, Rosie, I want to say. Humans have done and can do so much that is good as well. There’s nothing wrong with the Anthropocene – our current geological epoch, in which humans are the main driving force of geological change – as such, my friend Ian Rappel says; it’s just the way it’s being run.

And we're not involved in how it's being run very much – this is, above all, a failure of democracy, but that's a story for another day.

So I am left with a conundrum. Rosie is right that we are destroying nature, and yet life must go on. You and your generation are in effect being socialised by the adults in your lives – including me – into accepting harmful behaviours as normal. How can I help you understand that the system you and I are part of is wrong while also raising you within that system?

The only thing I have to fall back on is stories. So here's the one I told yesterday:

Once upon a time there was a squid and a whale. They lived in Antarctica. But this time they travelled to Taimyr near the North Pole. They had picked up a cry of distress on the ocean soundwaves and they leaped into action, riding the Agulhas rings north to the equator and then hitching a lift on the Gulf Stream up over the top of Norway and into the White Sea. There they passed under the sea ice and along the coast of Russia until they came to the tip of Taimyr where the Kara Sea joins the Laptev Sea. On the islands off the coast were thousands of seals, nesting in the summer months. And in the sea was a large red ship with long lines of seal skins drying on the deck. As the squid and the whale approached, an elderly seal intercepted them and gave them the story so far.

'Thank you so much for coming. We called for you, we knew you could help.'

'What's the problem?' said the whale.

'Can you see the red ship?'

'Yes.'

'We had a good relationship with the Nganasan humans here before who used to hunt us in the summer months. We allowed them to wear the skins of a few of us. But this ship is killing too many. We need your help to drive it away.'

'No problem,' said the whale. And he swam towards the ship and gave the water a huge whack with his tail causing a mini tidal wave to carry the ship out of the channel and into the open sea.

The seals honked their thanks and settled back down to their nesting. But the next day the ship came back. This time the squid

reached up her tentacles, grabbed the mast and tipped the ship over so that it capsized and the crew leaped out into their lifeboats and were left bobbing on the ocean surface at the edge of the sea ice. They had no motors and no oars. There was nowhere to go, the land was far. The squid and the whale spoke to the seals.

'We are concerned, the humans could die of cold out here. We must help them. What can we do?'

'We can get them to the land,' the seals said. 'Together we can push their boats. But then their own kind must help them.'

'OK,' said the whale. 'Who are they and how do we do that?'

'We know them, we will call them,' said the seals.

The seals pushed the boats and when they approached land they made a strange noise that the whale and the squid had not heard before. After some time, figures appeared on the shore. Together the whale, the squid and the seals gently pushed the lifeboats towards the shore until they came to land softly on the beach where the other humans stood waiting.

The Nganasan were dressed from head to toe in reindeer skin and seal skin. The sailors from the boat were chattering and freezing, half-dead. The Nganasan rescuers wrapped them in animal skins and warmed them up and took them to their tents. The sailors could not believe there were people living this far north.

'Without the animals and the warmth of their fur, we would die here,' the leader of the Nganasan explained. 'That is why we need their permission to hunt them and why we must maintain their health and habitat as well as our own. Without them, we cannot exist.'

'Permission? How do we get that?' asked the sailors.

'You must live with them and learn to listen. It takes many years, a lifetime even,' said the Nganasan. 'If you want us to take you back to your home, you must promise to never hunt them without their permission again.'

The sailors promised and the Nganasan took them on their sleds pulled by reindeer to the nearest town hundreds of miles away. And from there they journeyed back to their homes and they always kept their promise.

CHAPTER 16

The Stone Age is only yesterday

August 2022

Dear Daughters,

This is a reminder to myself to get off my arse and take you to sleep on the beach at least once a summer. The wonder and mystery of the planet is right there – outside, in the sky and on the hill and by the sea, all we have to do is look. And yet how often we forget to look! And how important it is to your sense of the world.

You didn't want to get in the car. It was a warm day. I had got the paddling pool out and we were sliding about in the garden. Cissy was covered in mud. You sprayed me with the hose to clean me after I had been gardening. It was a gorgeous day and you could not see the point of driving two hours to the beach. But I had seen the forecast – it was going to be a dry, clear night on the Irish Sea – and I insisted. I packed no tent, only sleeping mats and sleeping bags and a box of all your favourite things for breakfast.

We arrived at Abermawr beach as the sun was approaching the horizon. It was way past your bedtime and you'd watched a movie on the tablet in the car too. Still, as soon as we pulled up, you were off, racing down the stony track to the broad expanse of sand leaving me to struggle with sleeping bags, mats and all the rest. I didn't mind. It lifted my heart to see you discarding clothes on the shingle and racing through the shallow rivulets of low tide towards the rolling waves, folding over each other along the wide golden shore.

An elderly lady with a spaniel on a lead met me on the coast path and gave me a big smile. She could see me struggling with the gear and could see you splashing in the distance.

‘Lucky girls,’ she said, nodding towards the two tiny figures leaping over the waves as the sun melted into the sea behind them.

‘Yes.’ I smiled back.

By the time I had blown up the mats and made the camp, the sun had gone down and it was dusk but I joined you in the surf. Then we dried off and snuggled down into our sleeping bags.

‘Will the tide get us here?’ Cissy wanted to know.

‘No,’ I said. ‘See that line of seaweed there?’

‘Yes.’

‘That’s the high tide mark.’

‘OK,’ you said, sounding doubtful. You seem to have inherited your mother’s scepticism of my judgement on health and safety matters.

Soon you were snoring softly on either side of me, and then I joined you. But in the middle of the night I woke up with a start. I opened my eyes to see you, Cissy, with your face to the stars staring at the glittering display of the Milky Way blazing across the night sky. We watched in silence as one shooting star after another arced overhead towards the sea.

‘Dad?’ you said.

‘Yes, darling,’ I replied.

‘I’m glad we came.’

In the evening you had made a stone circle out of pebbles on the beach. In the morning we swam again and on our way down to the shore discovered preserved logs peeking through the sand. Apparently it’s a recent phenomenon that storms are revealing the remains of ancient forests all along the beaches of Cardigan Bay. The Stone Age is only yesterday in geological time: and we are only here for the briefest moment. This is a note to self (and to you) to make the most of it!

CHAPTER 17

Is it our fault?

December 2022

Dear Cissy,

We are back in the mountains of Slovakia! It is wonderful to be here in the clear air, under the snowy peaks, although this time the snow is very thin on the ground and you are learning to ski on nursery slopes fortified with artificial snow. I climbed to the top of Lomnický štít, the second-highest peak in the range, and at the top, on the final pitches which should have been sheathed in ice, the mountain guide and I were climbing on bare rock in warm sunshine and T-shirts. It's still beautiful and you love it. You were worried about the war in Ukraine and to tell you the truth so were we a little bit. But we could not let Grandpa down. He is so happy to see you, and you him.

He took us to the Natural History Museum in Prague that sits at the top of Wenceslas Square, where Czech students including Katka, Grandpa's wife, confronted Russian tanks in 1968 and where she and others celebrated when the Berlin Wall came down in 1989. The huge sandstone building has been recently restored with an incredible suspended stained-glass roof.

The centrepiece in the main hall is a huge, twenty-three-metre whale skeleton hanging from the roof. The body of the female fin whale, one of the largest fin whales ever recorded, was washed up in Northern Norway and retrieved by fishermen working with a young zoologist called Fridtjof Nansen (later a famous explorer). The skeleton was offered for sale. The notice reached a luncheon club in a pub in Prague and twelve citizens committed to raise the funds for the skeleton and donate it to the National Museum of Bohemia. Now it looms over the hundreds of thousands of

visitors who come to the national museum every year, a reminder of the vastness of some of the ocean dwellers to those of us who live on land.

It forms the heart of an exhibition about the miracle of evolution. The exhibition ends with a bluntness that is characteristically Czech. The final room holds the stuffed remains of one of the last white rhinos on earth. There are only two white rhinos left on the planet, both female, and thus the species is functionally extinct. We read the interpretation boards and contemplated the photograph of a Kenyan ranger dressed in green cuddling one of the remaining two. There was an awkward silence. I resisted the urge to move on. Then you asked me, very quietly, 'Is it our fault?'

This is the obvious question that you will inevitably arrive at in conversations about human-driven changes to our planet. Like Daphne's classmate, Rosie, it is the logical thing to think. But it is an impossible question to answer: 'Well, yes, and no,' or 'No, but yes,' depending on how far back you go and what your definition of 'our' is.

The alarming point for me was that your first, instinctive reaction to the extinction of the white rhino was one of guilt – for something that you had done nothing to bring about!

'It's not your fault or my fault, directly,' I said. And I explained that the activities of humans over many years has led to this situation. The land that the rhinos need to roam in, undisturbed, has steadily shrunk and, for a long time, humans hunted them too. The hunting stopped some time ago, but all the while the pressure on land has continued: firstly as a result of large-scale farming in the early twentieth century following the European colonisation of East and Southern Africa, and then since as the whole human population has grown and the protected areas where the rhinos live has come under pressure. Lastly, the popularity of rhino horn in China, where it is believed to be an aphrodisiac, has driven a huge trade in poaching in the last thirty years that has had a big impact on rhino populations. Almost certainly, humans have accelerated the extinction, but we don't know what the rhino's story would have been without humans. Were they on the way out anyway? These kinds of questions we might never know the answer to.

This seemed to me a pretty flimsy response. And I felt quite defensive, as though I was having to prove that humans were not at fault, and you seemed reluctant to believe me against the evidence available. I was a lawyer flailing around, losing the argument in front of the jury. I think my instinct

to educate instead of empathise can be unhelpful: perhaps that's my response to avoid having to feel. After all, so much of the rhino's recent tragic story has happened during my lifetime – what did I do or not do? What could I have done? There is so much sadness in the sixth mass extinction, we are surrounded by it all the time. How can we not feel? And yet, how can we tune out the bad news in order to carry on with our busy lives? Maybe it would have been better to just say, no, it's not our fault, be sad about the rhino, say goodbye to the animal and hold your hand. Perhaps shame is a risk for us both.

You went quiet after that and we walked around the museum without speaking much, your little hand in mine. You perked up when we got to the rocks. We spent a long time looking at the incredible colours held beneath the surface of the earth: the cobalt and tourmaline and malachite. Maybe this is why you love geology and fossils: there was no hint of human agency here – it was safe territory, just wonder at the infinite beauty of the mysterious workings of the earth's crust. The amazing crystals revealed geodes inside them bigger than you and me that take thousands of years to form. It was humbling and inspiring at the same time. The rocks are timeless; the rocks are safe. They are impassive and forgiving. Here is a different view of time on earth. Here is solace.

CHAPTER 18

The future!

February 2023

Dear Daphne,

This past weekend we went to stay in an amazing treehouse for Mum's birthday. It was a surprise to her as well as you. And when you got there, you seemed more blown away than her. It was quite an amazing place, with cabins in the trees ten metres up. The little pod was suspended on beams bolted around the growing limbs of the tree so as not to penetrate the trunk. A composting toilet was also suspended on a platform, and a wood-burning stove heated the water that fell with gravity into a wooden shower stall on the ground.

'It's the future!' you exclaimed, racing around the tree.

'What do you mean?' I asked.

'It's how to live eco!' you shouted and went around the platform pointing out the composting loo, the wood burner for heat and hot water, the natural materials, the lack of concrete and fossil fuel central heating. You grasped the concept in its entirety. For a good half an hour afterwards, you kept saying, 'I can't believe it, the future! It's possible.'

It was like a dam had been breached. You had assumed the contradictions and bind of modern life were insurmountable: perhaps we (I) had encouraged you to compromise too much. What you had lacked up until that point was an *example*. You could not imagine the alternative to modern infrastructure until you had seen it. Talking can only get us so far. The key element in this episode was the imagination. It helped you to imagine a future you'd like to see.

CHAPTER 19

We need to talk about Lego

March 2023

Dear Daughters,

We need to talk about Lego. And Playmobil, and the small mountain of soft toys in your bedroom. We need to talk about plastic.

Your bedroom is covered in posters from your *National Geographic Kids* magazine: of seals, coral, tree frogs, snow leopards, ocelots, owls of all different kinds, sloths, panthers, monkeys, penguins, blue macaws. The soft toys you call ‘my guys’ also represent animals of all kinds: there is a snake, whale, crab, squid, raccoon, tiger, mouse, rabbit, reindeer, polar bear, panda, goose, sloth, not to mention cats, dogs, lions and dragons. The games you play with Playmobil are also usually centred on the animals – their needs, habitats and experiences – not the human figures. It is the animals that come to life, it is their eyes that you are seeing through. When we go away, we must take several of your guys with us. When it is bedtime, they, too, must be settled down and tucked into bed. And it is their perspective that is prioritised when I try and encourage you to reduce the crowd: ‘They don’t want to go to the charity shop, they like it here.’

Animals are a natural portal into nature. They are the door through which, by empathising with them, you can appreciate the more-than-human world. It always was a natural part of childhood. In a very old photo I saw of Sámi kids playing in the snow outside their *laavo* (tents made of reindeer skins) a hundred years ago, they had little animals carved from wood, arranged in a scene – just like the ones you make out of Playmobil. It is one of the first wonders of consciousness to realise that there are other beings out there that resemble us, that have eyes and feet and wings, creatures that can communicate with each other if not with us. Connecting with them in

non-verbal ways is a key step in learning that we are part of nature, not separate from it. And seeing the world through their eyes is critical to 'thinking like a forest' or 'thinking like an ocean' – in order to act appropriately in the world for the benefit of all creatures that share a habitat, rather than simply for the benefit of humans, or a single human.

Daphne, your first word was 'dog'. Cissy, yours was 'bear'. Not long after you mastered 'bear', Cissy, an owl hooted outside your window and you said 'owl'. There has been a nesting pair of tawny owls in our neighbours' garden for your whole life and they have had a large influence on your imagination, both of you, and on Cissy's choice of favourite animal: there are half a dozen owls amid the guys as well as many smaller owl figures along the shelf by your bed.

What a terrible irony, then, that the avatars of the real animals that you love and want to protect are part of the process that is driving them to extinction. About 1 per cent of global plastic production goes towards the production of toys for kids. And plastic production is one of the most insidious and harmful industries contributing to both global warming and biodiversity loss. It might seem like a wonder material, but plastic is suffocating the planet.

When oil is extracted from the ground it releases emissions, and when it is refined to make plastic this also releases emissions. When it is processed into different kinds of plastic, hundreds of hydrocarbon-derived toxic 'forever' chemicals are added to give it certain kinds of properties: bendiness, rigidity, colour, texture and so on. The waste from those factories is gruesome. Then, when it is shipped around the world it has a heavy carbon footprint. When cheaply made plastic that does not conform to European Union standards enters our homes, it then continues to 'off-gas', to release some of those chemicals into the atmosphere (a sofa or a foam mattress can continue to off-gas for up to a year after purchase). Your toys and teddies should be stable and safe but up until quite recently, bisphenols (known as BPA and BPS) were not understood to be toxic and were found in babies' bottles, children's clothes and food containers, among other things. The dust in our homes is made up of the things that are in them. And if our carpets, clothes and furniture are made of polyester then, it follows, so is the dust. We now inhale up to 5,000 microplastic particles every day. Then, the kicker: when your toys finally reach landfill the plastic will degrade and release all those toxic forever chemicals that went into their

construction into the soil where they will leach into the rivers and then the ocean. The US Food and Drug Administration has started issuing warnings about high levels of forever chemicals in freshwater fish, but they are now present in most of our foods (not just from waste but from the plastic packaging itself that is used to wrap and transport food). And these chemicals are accumulating in the food chain with as yet unknown long-term consequences. This is most worrying in the ocean because the ocean is the ultimate dump where most of our waste ends up.

For my new book on the changes in the ocean and the Gulf Stream, I've just interviewed some scientists looking at how the microplastics that make it into the ocean are interfering with plankton with huge consequences for how the ocean cycles oxygen, carbon and food at the base of the marine food web. Tiny pieces of tyres from cars and tiny fibres from polyester clothes make up the bulk of the microplastic pollution in the ocean but leached forever chemicals play their part too. Plankton eat them instead of their normal organic food and then when they die or are eaten themselves they take that plastic and its chemicals to the sea floor or into the body of the larger fish that eat them and so on. What's more, the toxic chemicals seem to be thinning the skin of the ocean, the so-called 'lipid layer', made of the fats excreted by plankton. This skin regulates evaporation and, if it goes, could speed up the accumulation of water vapour in the atmosphere, the main driver of global warming.

I can't tell you any of this even if you could understand it. Instead, I must hold the information and, like a spy who has signed the Official Secrets Act, keep it confidential until such a time as it may be safe to reveal it. This is difficult. How much to reveal and when is a question of judgement and I don't know when or what is right. What guides do we have for breaking terrible news gently? This is not like news of a death or of war, an event with a beginning and an end. It is more like a kind of secret that, once revealed, slowly transforms what you thought you knew. I often think of the Hollywood film *The Truman Show*. Will you be angry when you find out what I didn't say? I hope you'll appreciate the predicament I am in. The failure of adults to 'tell the truth' is a consistent feature of the emerging research about eco-anxiety, climate awareness and children's feelings.

So when you ask, Cissy, 'Are my teddies OK?', I am worried. How much can I reveal about what I know?

'What do you mean?' I say.

‘Because they are made of plastic.’

You know that plastic is bad but you also love your teddies. To you, your guys are like people, they are animate, they have thoughts and feelings. I must tread carefully.

‘They’re fine,’ I tell you.

‘Squirrel is recycled!’ you announce. The squirrel has a green label with the word ‘nature’ on it. But recycled plastic is a cruel joke: there’s always more virgin plastic required and there are always emissions, chemicals and waste involved all over again. It’s not recycled in any normal understanding of the word. Better would be to store the inert plastic in a safe place until it can be burned and the gases and toxins safely recovered.

‘Well, that’s a bit better,’ I say. ‘What we really need to do is try not to buy any more of them.’

You wince at this and make a face.

‘Let’s look after the ones we have and listen to what they are saying.’

‘Yes!’ You brighten. Despite their harmful material, the value of your guys in your life is significant: channelling your love of animals, feeding your imagination and empathy, accessing moral worlds that adults may struggle to remember or understand. This plastic crowd, is, in some strange sense, a phalanx of ethical guardians in our compromised household. You have been invited to love toxic things but what you have imagined with and through them is unpolluted. And that is a light that we would all do well to follow.

CHAPTER 20

A second childhood

April 2023

Dear Daughters,

It's springtime, the days are warming up and I've been at large in the garden again, planting vegetables. Chitted potatoes in among the heavy manure, spinach seeds in rows, little plugs of leeks. We're using Libby's gardening book for children and following the rotation. This is part of my own seasonal ritual now. Mum laughs at how little produce actually comes onto our kitchen table, but getting my hands dirty, seeing green shoots poke above the ground and the deep satisfaction of cooking and eating something you've grown in partnership with the soil, the sun and the rain is a source of great pleasure and comfort. But, as with all human projects, they rarely stay in their lane. We seem hardwired for ambition. I have been measuring and sketching to see if we can fit more raised beds into our small garden. I have been eyeing that unproductive corner, the pond.

While standing in contemplation of the yellow flag irises shooting out of the sphagnum moss in the matted surface of the water, Daphne, you came along and asked me what I was doing. Do you remember? I explained and asked what you thought. We peered into the murky water and saw specks of insects popping on the surface and a water boatman rowing itself across the meniscus. Grass from the lawn was sending very long tendrils over the rocks to access the soupy water.

'I don't think that's a good idea,' you said.

'Why not?'

'There's lots of things that live in that pond. Better leave nature alone, Dad.'

For a moment I was taken aback. I had to accommodate this challenge to my desire to ‘improve’ the garden. But I knew you were right. I’d have to work around the other species with whom we share this patch of ground. It was a sudden shift, a moral corrective: I was not thinking like a forest.

Panu Pihkala is an environmental researcher from Finland. He uses the phrase ‘climate maturation’ and I think it fits my experience here. Just like the first one, this ‘second childhood’ has its moments of initiation, when we understand the world anew. Like moments of crisis such as a death in the family or displacement, the pieces of a world are in motion and it is a while before our worldview settles into a new, stable picture. This is what is happening on a larger scale, Pihkala argues: we are like children coming to terms with a world that is unfamiliar. And thus, we need to grow up a second time, with a new set of assumptions for this new world. But you are already living there! You are showing me the way.

Thinking like a forest is not complicated but it is hard. It is a way of being and acting that acknowledges and promotes the agency and well-being of all species; and, crucially, that recognises that when your existence depends on the death of another – as it often does in nature – you only take what you need, not what you can get away with.

For adults raised in industrialised or industrialising societies, such a worldview runs totally counter to the logic of modern economies whose definition of ‘sustainability’ is ‘how much can we profitably extract while still maintaining the viability of natural systems’. It can be hard to get your head around. But, to children – as you showed, Daphne – restraint and care is instinctive. And so, while we may baulk at the task of building new cultures and unpicking the logic of capitalism, we have ready teachers on hand and all around us: our children. You are the best guide to how to live now.

Rachel Carson, the famous American environmentalist, wrote a bestselling book published in 1965, a year after she died, called *The Sense of Wonder*, in which she argued, ‘If a child is to keep alive his inborn sense of wonder ... he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in.’ If the challenge of our moment is to appreciate the interconnectedness of all life on earth, then the first step is relearning how to see like a child. So, let’s grow together: your childhood and my second childhood, side by side.

CHAPTER 21

You could write a book!

May 2023

Dear Daughters,

When I collected you off the school bus today you flung your bags at me with more force than usual and stomped away without speaking. You are angry. I gather your head teacher is angry too. And now that I've heard the whole story, so am I.

This year you both joined the eco-committee at your primary school. There is a photo of your group, all smiling proudly with new brass badges pinned to your red school sweatshirts. And there is a video on the school page of your presentation at assembly (in Welsh, so I didn't understand) where you all speak confidently and point at the slides, and the rest of the children give you a big round of applause at the end.

In many respects your school is progressive and ahead of the game. The committee devises projects on sustainability and holds the administration to account on various measures. You had passionate debates about planting trees on school grounds, rewilding a portion of the playing field, and looking at the school supply chains: all terrific ideas and wonderful examples of the children taking responsibility. Much of this is constructive and positive and is a far cry from the disempowerment of my own experience of primary school in the 1980s. The only activism we experienced then was the cut in the milk ration for schools and the circulation of the slogan 'Margaret Thatcher, milk snatcher!'

Your committee was designed to give you some agency although it seems to have led to a harsh lesson in the realities of how hard it is to effect change in practice.

You decided to select what you felt was an achievable goal: to try and persuade the local authority to switch the paper towels in the toilets to recycled ones. You wrote letters. For a long time you got no reply. Then eventually one came. The council said that it was too expensive to switch.

‘Climate change is a problem of money. They’re not going to change unless they are forced,’ Cissy pronounced.

‘Yes,’ I said – I had to agree with you.

‘What’s the point?’ Daphne said, suddenly cynical about it.

I tried to rally you. I explained that every little helps and that the committee could be a powerful rehearsal for civics in practice, for later in life, and an education in how change happens and indeed the barriers to change – such as money.

‘Yes, I suppose so,’ you said, sounding almost grudging. I could see the reluctance to hope, the attraction of despair.

What you had experienced was the indifference of the adults whom, you had assumed, had a duty of care towards you (and by extension the planet). But ultimately you and your classmates found that you were alone. What might have been a lesson in empowerment instead became an example of its opposite.

Most schools place a strong emphasis on encouraging recycling, reducing plastic or energy use, promoting nature-friendly behaviours and the improvement of green spaces. In this telling, environmentalism is modelled and taught as a ‘solution’ to climate change in which we must all ‘do our bit’. This is a fossil fuel agenda. It is framed as a moral choice: a question of individual behaviour, not a story about how we have all been harmed and constrained by the failure of politics, the criminal conduct of fossil fuel executives and a financial system that is not fit for purpose. Unwittingly, the school had set you up to fail.

You understood more about responsibility than the council that ignored your suggestions. Amazingly, you have not been put off.

‘We need to think about it more and talk more about what we can do,’ Daphne said.

I watched this fire of care and concern that had been kindled with interest and some cautious pride while I also worried about how easily it could transmute into guilt.

The lack of care of the local authority seems trivial but it is a symptom of something wider: institutional and generational carelessness. And, as the

research so far shows, that could be quite damaging in the long run. Witnessing destructive or minimising behaviour by adults, corporations or governments that violates core moral beliefs, without having the agency or power to stop that destructive behaviour, can constitute ‘moral injury’: an injury to the child’s sense of self that causes trauma. Emerging research by psychotherapist Caroline Hickman and others from the Climate Psychology Alliance suggests this can have serious mental health consequences as children feel guilt and shame at what they have seen, or worse, blame themselves. I hope that you don’t.

Across the border, Monmouthshire County Council responded completely differently. There is a news story online about schoolchildren being invited into the council chamber and debating with the councillors about their priorities, and the councillors voting to endorse the children’s recommendations. This is responsible governance. But I suppose both lessons are valuable: receptive and unreceptive leaders are everywhere. The trouble is, we are formed by our experience. Will you grow up always thinking that local government is pointless?

Following up on Cissy’s point about money and being forced, we talked about pressure, how it is applied. Theories of change are one of the things we discuss a lot at Black Mountains College, they are a major part of what we teach: how change happens, or not. Part of what students have asked to learn about is how to run citizens’ assemblies to manage things for ourselves where older, corrupted structures of governance seem incapable of making decisions in the public interest. How does change happen, meanwhile?

‘We all have to work together to force them,’ I say. ‘And to find new ways of doing things, of building a different kind of culture.’

‘How do we do that?’ asked Daphne. ‘We don’t have the power. And we don’t even vote.’

‘True,’ Cissy said.

‘But if we could force the Welsh government to adopt eco policies then other governments could copy them,’ said Daphne.

‘That’s a great idea,’ I said, and indeed, it is one of the most promising avenues for change at the national level. Most good ideas seem to originate at the periphery and slowly make their way to the centres of power.

‘But it’s more than that, isn’t it? It’s a way of thinking, a way of life,’ I said.

You both looked puzzled for a moment.

‘I know!’ said Daphne suddenly. ‘You’re a writer, you could write a book and it would go viral!’ And so the idea for this book was kindled.

CHAPTER 22

We are not normal

September 2023

Dear Daughters,

When not preparing for the arrival of our first undergraduates at Black Mountains College, I've spent time this summer reading more about parenting, psychology and eco-anxiety and interviewing some experts. If I am struggling to communicate these things to you in an age-appropriate way, then perhaps others are too.

I talked to the author of the largest global study to date on eco-anxiety in children, Caroline Hickman at the University of Bath. It has been a big relief speaking to Caroline. For the first time, I found someone who has validated my approach with you guys. Her message is that we must talk about the world as we see it to children as early and as often as possible. She introduced me to research in which a large majority of parents said they were reluctant to raise the issue with their children and that 57 per cent of people in the UK report not talking about it at all, with anyone. We are not normal, it seems! But it also means we are pioneers, we have so much to learn, and perhaps to share.

Caroline said so many parents think their kids don't know about climate change. She described to me an experience of going to interview a ten-year-old boy that perfectly illustrated this gulf in understanding. When she arrived one parent commented: 'I don't think he even knows much about climate change, let alone worries about it.'

Then, shortly afterwards she watched the same parent's face change from one of uncertainty to horror as they listened to their child (happily) describe climate change as resembling a continent-sized crocodile that was crawling across the earth, eating endlessly, while rotting from the inside out so the

horrible flesh was falling away and its scales were being trodden into the earth as it disintegrated and died yet it kept eating and eating until there was nothing left for people or other animals to eat.

It was perfectly clear that the boy knew about it, knew the causes and could explain it through a compelling metaphor. And this is not just a problem in the Global North. Caroline's research network, which spans Nigeria, the Philippines, the Maldives, the Caribbean, Canada, the US and Europe, teems with evidence of parents who are struggling with how to make sense of this and, often, with how to manage children who are struggling with what is coming to be called 'eco-anxiety'.

Her team interviewed 10,000 children around the world and found that this 'anxiety' is epidemic worldwide and not just in countries on the front lines such as Pakistan and Nigeria. One in four children feared having their own kids. Half reported being dismissed or ignored by adults when they tried to speak about climate change.

A significant theme of Caroline's research is that harm to the natural world is not the main cause of distress. It is that adults and governments are exemplifying destructive activity and failing to listen to people's concerns, or the science, and the young people are powerless to stop it. Her study found that 'climate anxiety in children and young people should not be seen as simply caused by ecological disaster, it is also correlated with more powerful others (in this case, governments) failing to act on the threats being faced ... Current narratives risk individualising the so-called problem of climate anxiety, with suggestions that the best response is for the individual to take action. Our results suggest that such action needs to particularly be taken by those in power.'

All of this is to say, that if you are feeling worried about the world: that is right. It is appropriate to worry. And what seems to be the case, as with your experience at school, is that the source of the problem is not the state of the world, but the fact that adults are not doing enough about it. As such, the worry often seems, at root, to be about power and powerlessness within society. The answer therefore also lies in power, agency and justice, and not necessarily in the realm of doctors and counsellors which is where many concerned children are ending up.

'Eco-anxiety is not anxiety,' Caroline told me. Worrying about the planet is a sign of a healthy mind, not a sign of a disorder that needs to be fixed. She believes that Western psychology has gotten lost in the medical

paradigm of 'fixing' and 'treating' pathologies. It is still stuck in an out-of-date worldview.

Caroline said we should not be trying to make the anxiety disappear, we should be listening to it instead. This was a relief to me. What is that worry telling us? If it is telling us to be alarmed, then we should probably be alarmed! But what else is it telling us? We talked about the idea of sentinel intelligence: the idea that some people are more attuned to latent threats or to the natural world than others, like the birds that get airborne before an earthquake. I think children could be a bit like those birds: you are naturally more in tune with your surroundings than adults who have forgotten how to listen. So, trust yourself and your feelings. You might just be the sentinel our society needs!

CHAPTER 23

The lowland hundred

October 2023

Dear Daughters,

This evening we had a kind of otherworldly experience. I told you a Squid and the Whale story about Doggerland – the submerged land between Denmark and Britain that is now at the bottom of the North Sea but once formed a bridge between our islands and Europe. Our heroes found houses and human artefacts on the sea floor and the residents of the mud told them the story of Doggerland and the flood that submerged the marsh dwellers and their habitat beneath the waves.

Then, when I had finished, Cissy, you said, ‘That’s like Cantre’r Gwaelod.’

‘What’s that?’ I asked.

‘There was a sunken city in Wales too!’ said Cissy.

‘The Welsh Atlantis!’ said Daphne.

‘No way!’ I said. And it’s so fascinating you succeeded in postponing bedtime until you had told me the whole story: the legend of Cantre’r Gwaelod that I had never heard before even though it is a well-known myth in Wales. It is one of the stories of the Mabinogion, the collection of Celtic myths and legends about the Brythonic Celts who inhabited ancient Wales.

Cantre’r Gwaelod means the ‘lowland hundred’, and the prosperous city was part of a kingdom of fertile land near the coast on an estuary facing Ireland. It had a system of sluice gates to control the tides and keep the water out, a bit like modern-day Holland.

Each night, soldiers would take it in turns to close the gates and keep watch to make sure the sea didn’t breach the walls. One night it was the king’s daughter’s birthday and everyone was celebrating. The one soldier

whose job it was to keep watch was in love with the princess. When he noticed that the wall was cracking, he did not warn anyone. Instead, he stole into the princess's bedroom and spirited her away on his horse inland, to higher ground. Meanwhile the waves breached the walls, the city flooded and all the inhabitants drowned. At the end of the story, the soldier and the princess look back from the hill at the towers of the city disappearing beneath the water.

When we look it up the following day, we see there are other versions, but one thing they all have in common is that the survivors go on to become the king and queen of Wales.

In another version, which is told in poem 39 of the Black Book of Carmarthen, there is a soldier called Seithennin and a maiden called Mererid who is in charge of the wells of the city. On the night of the storm she fails to close the gates and the city floods. She tries to raise the alarm and warns the soldier: 'Stand up, Seithennin, look out at the waves, crashing over Gwyddno's realm.' Eventually, the bells ring out but it is too late. There is a moral dimension to the story, that the inhabitants were reaping some kind of karma for immoral behaviour: 'Woe to the maiden, the aggrieved cup-bearer, who bore in her cup the sea's chagrin,' the poem says.

In other versions of the story, Seithennin is a neglectful soldier who is too drunk to warn everyone about the storm and bears responsibility for the destruction of the lowland tribes. Remember those sunken forests uncovered by the tide on the beach at Abermawr? That is part of the same story. The coastline was further out towards Ireland. And, can you believe it, last year, in 2022, researchers uncovered a medieval map in the University of Oxford's Bodleian library that clearly shows two islands off the coast of Wales in the middle of Cardigan Bay north of Aberystwyth!

The crazy thing is that this matches with what we know about sea-level rise at the end of the last ice age, which I wrote about in *The Treeline*. As you know, that book tells the story of the boreal forest at the top of the world shifting north, turning the white Arctic green as the planet warms. The trees originally came north on the heels of the melting ice. The progress of the trees, the ice and the sea level went hand in hand.

Sediment cores in the ocean show that sea-level rise then was not a gradual process. The sea level rose in rapid jumps as the last of the ice sheets collapsed 8,000 years ago, in particular the Laurentide ice sheet in

modern-day Canada, which raised sea levels by over a metre all at once, disrupted ocean circulation and cooled the earth. This is way before any written history but perhaps not beyond the reach of oral human histories. It makes perfect sense that stories of floods and civilisations being destroyed are common to so many cultures, including the famous Old Testament story of Noah and his ark. It probably had a basis in fact. The Irish Sea was several metres lower at the time of the Brythonic Celts. The stories of people walking between Ireland and Wales might have more truth than we know.

It seems to me that the Cantre'r Gwaelod story is perhaps more helpful than any lessons on science or politics. The durability of the flood myth and the links with immorality, unheeded warnings and unchecked decadence may end up being not just legend but prophecy too. I find this fantastical as well as fantastic. It is exactly what I hoped studying at Welsh-medium primary school would give you. Never mind whatever else you might learn. If you can situate human experience within a changing landscape where humans are at the mercy of nature, then you have learned a valuable lesson for our current moment. Who will be the modern-day Mererid, ringing out the bells, warning the residents of the city? Is she already among us?

CHAPTER 24

We don't want lessons on oxbow lakes!

November 2023

Dear Daughters,

As a rule, I don't ask you about climate change, or any other tricky topics. I wait until you ask and then I try and answer your questions. I don't want to corral your experience or worry you unnecessarily. However, I broke the rule this week. I asked you if your teachers mention climate change at school. I asked you because Caroline Hickman and I have been swapping notes about schools and what they get wrong or right about this difficult challenge.

This is what you, Daphne (in Year 5), replied: 'If they do talk about climate change it is always, "*unless*, blah, blah, blah ..." or "What if ...?", like this is something that *might* happen. Not something that *is* happening. We can see that's not true. The seasons are changing *now*, nature is dying *now*, trees are being cut down *now*.'

Cissy, you (in Year 3) said, 'Everyone knows about it, but when I talk about it my friends change the subject and talk about something else.'

Part of the goal in setting up the college was to address the lack of climate change education in mainstream schooling in the UK. If it is taught at all, it is usually in the future tense, as Daphne says. It is usually only in geography lessons, and only discussed in terms of scientific solutions or activism. The fact that the government claims a new Natural History GCSE is some kind of answer to the lack of climate education speaks volumes. Educational research from the University of Manchester argues that the English national curriculum has been shaped through lobbying by fossil fuel interests in a process that researchers in Canada have described as 'petro-pedagogy'. This is characterised by a relentless focus on science that

is heavily driven by industry and by a particular vision of the economy. I did some research for a talk about public education earlier this year and was dismayed to see a statement from the UK Department for Education, apparently satisfied that, alongside the new GCSE, ‘An environmental science A level is already available for those that have a keen interest in the sustainability of our planet.’ Why is this only an option post-sixteen? What child should not be educated about the sustainability of the planet? A proper treatment of climate change in the curriculum would have sustainable adaptation threaded through all subjects and a proper accounting for history with politics and civics as the forum for solutions.

Education, like parenting, makes assumptions about the future. If the future is a moving target then that mission becomes much more complicated. Most schools and colleges, and the national curriculum in all the countries of the UK, are founded on an assumption of preparing young people for some version of the status quo and some form of technological ‘progress’. Programmes and subjects of study by and large reproduce many of the problems of our current arrangements. Take farming for example: fossil-fuel-derived nitrogen fertiliser and pesticide use cannot continue at present rates without serious consequences for the ability of the biosphere to support pollination, soil health and food production. And yet this is still taught in classrooms up and down the country. Similarly, industrial clear-cut plantation forestry produces cheap softwood but also huge levels of emissions and biodiversity deserts. It is not sustainable either. And yet, this is the model still being taught. Science, engineering, business studies and finance, the list goes on – in many cases students will learn modules about ‘sustainability’ but this cuts across the totally unsustainable basis of the industries concerned.

At best, this stores up problems for students as they must make sense themselves of the gulf between the received wisdom of the educational institution or industry and the reality of our changing climate and rapidly deteriorating biosphere. At worst, it could be said to be a failure in both the educational mission and the duty of care of the institution.

On the one hand, most mainstream courses are not taking into account the latest science about the rates of change and collapse in natural systems – so this is a failure on their own terms. Meanwhile, on the other, by ignoring the changing context of the world into which they are sending students, they are failing to properly look after and care for them: they are setting them up

for psychological dissonance, even breakdown. At Black Mountains College we welcome many of these refugees from mainstream education, even from very well-respected and venerable institutions.

You know about the college, you know the office where I go on my bicycle every day. But at this point I think the most memorable thing about my office is the swivel chairs that you like to spin on! In time, I hope you will come to appreciate the different course the college is trying to take.

In our approach, we try and thread an awareness of our changing context through everything. This is what we feel is appropriate at the current time. According to the funding we get for free adult education in Wales, all our students at BMC have to do a course of General Studies. This can be the literacy and numeracy-based modules of the Welsh government's 'Essential Skills Wales' or our own core curriculum, which teaches what we feel are the essential literacies of the twenty-first century: ecology, earth systems, politics and civics – how to create change at different scales.

Our degree programme is even more explicitly framed around certain key questions: 'How can we learn the skills we need today?', 'How can we imagine the future?' and 'How can I play a role in creating the future?' There are some things we know for sure, and some things we don't. We have a very clear picture of the trajectory of the environment and earth systems. What is wide open is how human systems will respond. Any education that does not take those two facts into account is probably not worth its salt. And so, we don't train students for particular kinds of futures, rather we promote the idea of living with uncertainty and being ready to adapt, to think critically, to work with others and learn transferable skills.

The underlying philosophy is something that has stayed with me ever since I moved to Wales and became your parent: climate change and biodiversity loss is now inevitable. The only question therefore is about the scale of the disruption and the suffering that will follow. As such, our job is to minimise and mitigate that suffering as much as possible and to prepare for adaptation and collective resilience as much as we can. You know this, but many children (and teachers!) do not. Nor do they yet fully grasp that this is not a technological matter, it is not a science or geography lesson. Rather it is a shared enquiry into the wholesale change in our way of life that is now urgent. We should be on an emergency footing. But we are not.

For schools controlled by politicians, this is difficult terrain. The crisis could be an opportunity for schools to explore questions of responsibility,

agency, efficacy, action and inter-generational justice. But to do that opens up a Pandora's box of social and political questions that schools have long been trained to avoid. It can be seen as political with teachers wanting to shut the issue down. One teenager who is a member of the Welsh Youth Parliament told me:

I started as a climate activist in 2019 and I got a lot of abuse, some from the teachers. I was in Year 9. I gave a speech on climate change for the talent show and I had teachers trying to get me off the stage because I was trying to hold the school to account.

I was shocked when she said that. But I suppose it's not surprising given how politicised education has become: to think critically and follow the logic of the challenge that climate change poses is to arrive at some stark truths about the need to reconsider major assumptions about how our society and economy is organised. What's more, the goal of much of the climate deniers over the last two decades has been to make climate change controversial and political: imagine billions of dollars going into a campaign to sow doubt about gravity, or evolution, with the goal of making it controversial!

The irony is that reconsidering society is precisely what children themselves want. Caroline told me about a mixed-age group of secondary school children in Bath that she interviewed. She asked them, 'What do you need from schools to help you with the climate crisis?' The group of 11–18-year-olds said:

We don't need lessons on oxbow lakes in geography. We need lessons in how to build boats, houses, how to grow food, what are the names of trees, what are the safe plants to eat. We need lessons in how to talk to our parents about difficult things and lessons in activism, in civics, in how to lobby politicians.

I don't blame your teachers or your school, or even the Welsh government. The Welsh government has made good strides in placing climate and creativity at the heart of the new Welsh curriculum and given teachers the autonomy to teach it – unlike the much more narrow, traditional approach in England. Other countries are, slowly, making changes too. Teachers are doing their best. This is a problem that goes far beyond content. It is about

what we think education is and how we do it. All teachers and all parents fail to some extent. The hope is that our failures might also lead to learning. But to do that we have to embrace the idea that we are all learning together and that neither the teacher nor the parent has all the answers or the knowledge. Especially at a time of geological change such as the present, no one can claim authority about what this might mean for society or humanity, for a particular vision of the future. We must instead embrace uncertainty and learn again to be humble in the face of the awesome power of nature.

CHAPTER 25

What's wrong with turning anxiety into action?

November 2023

Dear Daughters,

Private jets are descending on Dubai for the global climate conference and millions of people around the world are hitting the streets. There is a big march for climate justice this weekend. Several of your friends are going on a coach to London to join the crowds and many of mine too. There's been quite a lot of talk about it in our friendship groups. You know about the COP – Conference of the Parties – meeting in the United Arab Emirates. There was a segment on *BBC Newsround* about it and you were quite cynical.

'They're not going to change. They haven't changed up till now. Why would they?' said Daphne.

I think you're right. The COP process is increasingly a charade dominated by more fossil fuel lobbyists than government representatives. Your children's book about the climate urges you to 'turn your anxiety into action', with joining a protest top of the list of suggested actions along with tree planting and other less systemic actions. If we were to follow that advice we'd be boarding a bus and joining the march. But something doesn't feel right.

The tension between the campaign demands – what we need governments to do – and the reality of their recalcitrance is too wide. I have no story robust enough to bridge the gap. Against this backdrop, the march looms like a danger.

I talked it over with Caroline and said I mistrusted the phrase 'turn your anxiety into action' and she almost exploded in agreement. 'It's a disaster!

It's dangerous!' she said. 'It's wrong on so many levels.' So. We're not going to the march. And this is why.

'Firstly,' said Caroline, 'you can't "cure" anxiety, you can only accept it.' And, as we discussed before, it's questionable whether anxiety is even the right word for appropriate alarm at the state of the world. The assumption in the phrase that Caroline rejects is that activism is a kind of cure for that worry. The worry is right and it must be acknowledged and then channelled. Activism might be a good route for channelling that worry, but it shouldn't be expected to make the worry go away.

'Secondly,' Caroline continued, 'the suggestion that your anxiety is your responsibility is already wrong. Your anxiety is the result of the failure of adults so whatever we mean by "action", it is not the child's responsibility to take it alone.'

This made perfect sense to me. At the college, I've come across many people young and old in the depths of despair after protesting with Extinction Rebellion and others against government inaction, often for the first time in their lives. Their anxiety actually stems *from* their action. They can find it hard to accept that the simple model of politics, protest and change that they had inherited from stories of the suffragettes, civil rights, the 1960s and Greenham Common does not actually work like that. Some of them have become locked in a kind of vicious cycle of more and more and ever-riskier protest, seeking to treat the anxiety with more action. But large-scale social transformation is slippery and complicated. It resists most simple theories of change.

In its extreme form, this vicious circle can lead to disaster. There is a brave and lucky writer called Charlie Hertzog Young who joined a workshop at Black Mountains College earlier this year. He had written a book about his activism journey that nearly claimed his life.

Charlie became a climate activist at twelve. He won an award for founding an environmental council in his school and later, aged sixteen, another from Gordon Brown, then the UK prime minister. Following further publicity he was invited to the World Economic Forum in Davos, aged seventeen, in 2009. He told the conference: 'There are young people in communities all across the world who are trying to facilitate change. We'd like you to help us to help you.'

Later that same year he went to the UN climate summit in Copenhagen where he accosted world leaders such as Bill Gates, Barack Obama and

Kofi Annan. He believed then that the lack of climate action was due to a communication deficit; if he could convince leaders of the urgency then they would act. They did not and Copenhagen was a failure. Some NGOs declared Copenhagen a ‘crime scene’ and Charlie sank into a depression. A cycle of manic activism and mental breakdowns followed until, ten years later in 2019, aged twenty-seven, he jumped off a building in London.

He smashed the lower half of his body and his legs had to be amputated. He would have died were it not for a swift-acting paramedic. He was discharged after six months in hospital and now uses a wheelchair and pursues a different kind of activism, what he calls the ‘quiet’ kind. The story of his activism and mental health challenges is told in his book *Spinning Out*, which charts a thoughtful and cautious path through the many perils of climate anxiety and climate action; in particular, how activism without a clear theory of change accompanied by hard-headed and realistic expectations can risk setting the kids up to fail.

‘I don’t blame myself for jumping,’ Charlie told the *Guardian*. ‘I blame the Conservative government, climate change, neoliberal capitalism and extractivism [the mass export of resources from the Global South associated with colonialism and post-colonial capitalism] but they are very hard targets.’

Charlie’s list of targets begins to get at the complexity and challenge of the idea of turning anxiety into action. ‘Action’ is not the same as ‘activism’. And when anyone proffers courses of action they should have a shared understanding of what harm or wrong we are hoping to address, why the suggested course of action is an appropriate response, and what we expect to achieve. A manic flight from despair never ends well. Clarity, here, is the handmaiden of hope. Confusion is the engine of contradiction and psychological distress.

Clarity demands a clear story: how do we think we got into this mess? If we think it’s just a problem of our energy supply, that leads to certain – limited – actions. If we think it is a problem of communication, like Charlie did, that suggests particular solutions. But from all that I’ve read so far from the histories of science to culture to politics I think that even if we had good politicians brave enough to take unpopular decisions and lead, they would probably be voted out of office in any case. The prevailing culture would not have tolerated them.

The story that makes most sense to me at the moment and the one I would like to be able to explain to you is the systemic tragedy: the inevitable denouement of flawed institutions and societies. If we understand the problem as more systemic, rooted in a long history of money, politics, power and the corruption of society and democracy, the solutions are not so simple. This is not an easy analysis to accept because it offers no easy answers. It involves a compassionate consideration of all of us as victims of historical forces that have played out over centuries. That process has now left us implicated as perpetrators as well as victims. We live in a culture that promotes and relies on products and actions that are driving the crisis. This is not to absolve individuals of poor moral choices but to acknowledge the deep structural nature of the crisis and the scale of the challenge we face in uprooting it.

If the roots are durable and far-reaching, if this is, in effect, a human crisis of culture and values and not simply an environmental emergency that we must solve while the clock ticks down, then the solutions are also more involved. Building social movements for durable justice takes time. It can stand on progressive traditions and as such involves an education that is broad and deep but it is the work of multiple generations and nations. There are no guarantees of immediate cause and effect. It is part of the pantheon of responses and the paradigm shift that is needed, but it is only one part. So in such a messy and confusing context, what counts as meaningful action?

This is not a question of us all ‘doing our part’ or asking everyone to identify as activists. This is about rethinking all that we do in light of the new reality we find ourselves within. As such, Caroline Hickman and I agreed: parenting is action, writing is action, counselling is action, cooking can be action and so on. In fact, parenting may be among the most fertile territories for social transformation. Everyday actions, done right, and with love, build culture.

Seeing our task as building a just and healthy culture rather than simply ‘climate action’ widens the frame of what counts as useful action and it widens the community of people working for the common good. It also sidesteps the fruitless debate about doom vs. optimism; the canard that it is ‘too late’ to stop warming and therefore there is nothing to be done. There is always work to be done, because, there is always good worth working for, even in the darkest moment. Holding someone’s hand in the air-raid shelter is and always will be a worthwhile and hopeful act. The age-old

biblical idea still holds true: we should feed the poor, tend the sick and teach the young.

More than this, however, building culture is the right focus because formal political action such as writing letters, protesting, and lobbying politicians for policy changes – while essential and urgent – is not, on its own, enough. Asking politicians to limit the madness of subsidising fossil fuel capital, reduce emissions or honour their targets is, in one sense, only prolonging an unsustainable economy and way of life. A net zero extractive economy based on infinite growth is still an unsustainable (and unjust) extractive economy.

Taking the climate, biodiversity and toxic pollution challenge seriously means making far-reaching and fundamental reforms to our economic and political systems themselves – and to the culture that underpins them; not just to limit the harm we are currently inflicting on other species and earth systems but also to adapt to the harm and change we have already unleashed. The current political arrangements have not managed to steward us towards a just and orderly transition to a civilisation within planetary limits. And there is very little indication that they will manage the coming shortages of food, water, shelter and habitable land in a fair and equitable manner either. In fact, on the current evidence, there is a real threat that liberal democracy will instead open the door to populist fascism that will destroy our democratic institutions from the inside out.

The work of building culture rather than ‘climate action’ on its own encompasses both those challenges. I worked in the so-called ‘mother of parliaments’, the British House of Commons. I have seen the impact letter writing, protest and organising can have, but also the intractability of power when its fundamental interests – fossil fuels, big business and growth – are threatened; consider for example the UK’s involvement in the Iraq war.

Your generation cannot wait for politicians to do the right thing. Nor, it is becoming increasingly apparent, will we be able to force political change through traditional forms of ‘civilised’ or ‘acceptable’ democratic activity. Which is partly why our government has now brought in the Public Order Act criminalising elements of non-violent protest and civil disobedience. What do you do when the law itself is immoral?

Politics might be complicated but the work of building culture is not. It involves all of that protest and lobbying work, if that feels right to you. But it also involves and invites everyone into a much wider conversation about

the injustices of the world right now and what we mean to do about them. If we are informing ourselves about the science, talking vocally about what's happening and seriously discussing what this might mean for our families, communities, jobs and regions then we are already doing a lot, perhaps doing all we can. In its simplest form, it means asking the question: what is the right thing for me to do right now?

Caroline suggests that an appropriate response to a child in distress and feeling anxious is not to encourage them to take action – whether that's taking part in protest, making individual behaviour changes, growing food or joining a group – but to help them understand the source of their anxiety, to listen to what they have to say and then to show solidarity, support and care for the child in taking meaningful and realistic action *together*.

So I asked you the question this weekend: what is the right thing for us to do as a family? If you remember, we discussed the pros of attending the rally; solidarity, strength in numbers, sending a message to our government. And we discussed the cons: Cissy doesn't like crowds, the distance, that fact that we had been to a different local protest recently about the health of the River Wye, the likely frustration and disappointment given the odds that the march would change nothing. Then we talked about what else we might do this weekend. And the fact that your parents were exhausted: Mum had been away and you had barely seen me in recent weeks. You hadn't seen the sea for ages, you said, and Daphne felt as though she needed to spend time 'in nature', to recharge. The forecast looked all right: warm with showers.

The beach at Skrinkle Haven is only accessible at low tide, via a slippery tunnel that is only revealed when the water retreats. We made our way through uneasily with sleeping bags, tent and barbecue materials, sliding over rocks and narrowly avoiding a splash. The reward is worth it for on the other side is a sheltered bay with a grand stretch of sand backed by towering cliffs.

For the most part it was an overcast day with occasional showers that we avoided under the cliff. But the sea was uncommonly warm so we went in more than once. Then, at sunset, the cloud lifted and Caldey Island lit up like a hearthstone in some ancient Celtic ritual and we all streaked into the sea together before snuggling into our sleeping bags. We had hoped to try and spot Jupiter through the binoculars that you gave me for my birthday but the cloud closed in at dusk and stayed there for the rest of the evening.

On the morning of the march, I felt guilty as our friends were making their way along the streets of London while we were swimming off the shore, floating in the bay and looking back at the striking cliffs with their brief record of life on earth pressed into rock. I was torn: I was in the wrong place and the right place at the same time. But you were right, Daphne, about the balance of self-care in order to care for others. In the sea, my urge to protect and fight for you and our earth had never been fiercer. We regarded our beautiful, troubled island with salt in our mouths and joy in our hearts. Perhaps you won't remember this day or recall it in this way, but I'd like to record for you my feeling of us all floating in the sea: we had recaptured not just our solidarity but also our sense of purpose. Here was something valuable, here was a feeling worth fighting for.

CHAPTER 26

When I grow up I'm going to live in Costa Rica

December 2023

Dear Daughters,

Once upon a time, Wales was covered in temperate rainforest. The wildwood that existed before the Mesolithic humans arrived on the heels of the retreating ice was probably only here for a short time before they began clearing it. But enough of it was left to survive into story and song. The Welsh myths and more recent stories of the battles against the invading Romans, Danes and English all involve the forest as a character, as territory, as a strategic advantage as well as a living repository of strength and culture. That is why conquering armies burned it down as a military tactic – a bit like the American use of napalm and Agent Orange to strip the rainforest in Vietnam. Imperialism doesn't change much.

There is almost no original forest left in Wales, only tiny slivers remain, usually in steep-sided river valleys that have little agricultural value, or thanks to hobbyist landowners who preserved small pieces for their own interest. Near where we live is a scrap of rainforest that has the lush feel of an ancient woodland, even though much of it is secondary regrowth after quarrying activity was abandoned 150 years ago. It's called Pwll-y-Wrach, the witch's pool. There is an impressive waterfall that plunges over a limestone ledge into a stone pool carved out of bright-red mudstone, which they say is where residents tested if suspected witches floated or sank. A party trick of mine is to lead students on a walk down there and ask them how old they think the woodland is.

It hums with life, with competing birdsong calling over one another and the constant rush of water all around. Impossibly tall ash trees groan with

ferns, moss and lichen and in the springtime the air has the sour tang of wild garlic that is everywhere underfoot like green flames in the undergrowth.

You love walking there, and, when it's warmer, swimming in a bowl downstream carved by another small waterfall that is as deep as you are tall. You call it the icy pool. It is where I go to submerge myself when things at work are not going so well.

This weekend, we walked there in the winter light. The bony ash trees, many pocked with the black smudges of the common plague – ash dieback – sent their naked fingers scrabbling at the sky. We talked a little of the story of the forest. How it once stretched all along the foot of the mountains to the sea. And how the trees themselves send chemicals out from their leaves to nucleate water vapour in the atmosphere, essentially harvesting rain to benefit themselves by propagating the habitat for more trees.

'I wish the rainforest was still here,' said Daphne.

We all agreed that would be nice.

'Where can we go to see rainforest that is still in one piece?' Cissy asked.

I told you about the remarkable story of Costa Rica where the government applied a 3.5 per cent tax on fossil fuels in 1997 and then used the money to pay farmers to leave land wild and also to plant trees and restore the forest. They paid \$64 a hectare. In the 1940s 75 per cent of the country was rainforest. By 1987 logging and banana plantations had reduced the forest cover by half. The government then pivoted the economy to one of ecotourism and agroforestry. Farmers still grow crops and select trees for logging but they do that *within* the forest. Sixty per cent of the country is now forest once more. Now they are electrifying all their public transport and domestic power and are nearly entirely fossil fuel free. It is a remarkable success story.

'Even cars?' Cissy asked.

'No. But the buses run on batteries,' I said.

'Wow,' said Daphne. You were impressed.

Later, at bedtime, you asked me to continue the positive stories.

'What other countries are doing well on climate change?' asked Cissy.

I told you about Denmark's decentralised green energy grid, Norway's progress on adopting electric cars and the UK's pioneering pledge to reach net zero by 2050 (although now regressing).

‘When I grow up we will have solved climate change,’ Daphne said as a kind of conclusion to the discussion and I didn’t know what to say. The challenge facing your ten-year-old brain (and my forty-nine-year-old one) is the same one that will confront all of us at some point: acceptance. But acceptance of what, exactly? Uncertainty is an incredibly hard thing to accept. Our minds instinctively revolt against it. We want certainty; even if it’s not good news, at least then we feel back in control and less anxious.

I couldn’t leave your comment unaddressed, although I really wanted to. The language of ‘solving’ is unhelpful yet so pervasive. Puncturing this illusion that we can ‘solve’ climate change is among the hardest and most unpleasant tasks I’ve had to face as a parent. At school and in the mainstream media, children (and adults) are sold simple and misleading slogans all the time. A rich discourse of ‘actions’, ‘solutions’, ‘things you can do’, to ‘fight’ or ‘stop’ climate change perpetuates the concept of a ‘challenge’ or an ‘adversary’ that humans can overcome. I wish such a framing were accurate but, tragically, it’s too late for such black-and-white outcomes.

So I felt I had to say: ‘No, darling, we can’t stop the warming. The forces unleashed are too powerful. But we might be able to slow it down and we must do all we can to try.’

You nodded and smiled and seemed to understand and I was left seized with love and fear and a kind of manic sense of protection for you both that was impossible to fulfil.

Cissy had a different solution to this intractable problem.

‘When I grow up I’m going to live in Costa Rica,’ she said.

CHAPTER 27

The world is nothing without wonky weird vegetables

January 2024

Dear Daughters,

There are six girls around our kitchen table. Four are eating sausages made from pork. Two are eating vegetarian ones. You've just had an epic game of laser tag for Cissy's eighth birthday. Now you're chatting away as you do with your friends, talking over each other and all at once:

'I tried those sausages and they're horrible.'

'That's your *opinion*!'

'Don't yuck my yum!'

'It may seem strange but I think sooner or later we may all have to become vegetarian.'

'Why?'

'Because of caring for the animals, and because of climate change ...'

'It's fine if they have had a good life, although not if they've come from chicken farms obviously.'

'Climate change is caused by fossil fuels, not animals!'

'Yes, but there are lots of chicken farms.'

'Humans are the worst species! They should be ashamed of themselves!'

'You went on holiday in an aeroplane.'

'So?'

'Yes, but you have a diesel car.'

'My parents have an electric car.'

'You go on too many holidays.'

'It's OK, because I don't eat meat, and that's the worst.'

'If you eat meat you are destroying the planet.'

‘You’re shaming me ...’

‘Your carbon footprint doesn’t make any difference at all!’

At this point I nearly intervened. I felt like saying, ‘You should not be arguing about this!’

I was worried. You are both devoted carnivores and no friend of vegetables. You love meat, but you also love animals. You need protein and your diet is narrow. You’ve both said you’d like to be vegetarian when you’re older, when your diet is more varied. You know these things and you are trying. Meanwhile the social movement to eat less or no meat and pursue plant-based diets is alive and well in certain affluent sections of society but not going so well overall as China is building pig factories as fast as power stations and the UK is building chicken farms as fast as wind farms.

But to hear you arguing about your respective carbon footprints was heartbreaking. This is precisely the kind of individual conflict that the fossil fuel companies want to encourage in the discourse about carbon footprints: to shift the blame and the responsibility onto individuals rather than on the system that gives us little choice. The carbon footprint concept was introduced by BP, the oil company, in 2004, precisely to encourage people to focus on their own emissions rather than on the structural violence and pollution of the oil industry. Campaigning or worrying about reducing individual carbon footprints leaves this (huge) fact unexamined and obscures a range of collective, more explicitly political avenues for action and change. It also ipso facto feeds guilt – *you* are responsible. It seeds shame and division among neighbours and friends. When diet and morality become entwined, especially in the interactions of young girls, the potential for shame will only increase. Food is scary territory for parents at the best of times.

Yes, the carbon footprint of meat is high. But it is on the menu at your school, just as petrol is for sale in the petrol station and polyester clothes are for sale in the shops. Children (and indeed adults) have limited agency in the choices they make, and we are all trying to survive in a system that requires the emission of carbon just so that we can go to work and earn a living. And even then, most people are not the worst offenders. The richest 1 per cent of people on the planet account for more emissions than the poorest 66 per cent. It is not your choices that are the biggest determinant of

your carbon footprint. It is your class, your income and your nationality more than anything else: it is your place in the economic system.

It is easy to forget this and focus on what we buy. Of course that's important, but it can store up trouble. If the story of the problem involves 'us' as a family and our individual choices this can invite shame – the parents are modelling guilt. I want to try and avoid that for you. This is not easy! You inevitably won't do what we say, you'll copy us and then try and rationalise it in your own way. This is what the human brain does first and foremost: it makes sense of reality before it seeks to change it. If you encounter information from your friends or others that contradicts this then you have a problem to solve. Either they are wrong or your family is wrong and then shame for someone is unavoidable: the family risks appearing not to care about the world or its youngest members.

Teenagers interviewed by the psychologist Sally Weintrobe said they and their peers often felt judged and therefore shamed by the dietary and sartorial choices of others:

People take offence. Just by doing your thing – taking an action, stopping buying a product – you are offending people. People feel that you are judging them.

Weintrobe talks about a bubble of 'uncare' in consumer culture. The consumer economy wants us not to care about each other or the planet because that might get in the way of purchasing. It needs us only to care about carrying on consuming. She says we can then experience this as the indifference of the group, as 'a powerful and active group defence designed to keep too much care at bay'. Please don't blame yourselves! And treat your friends with compassion. None of this is your fault.

Caroline told me a story of a family whose son was refusing to eat until the family replaced their petrol car with an electric one. Everyone agreed that petrol cars were bad and electric ones were preferable in terms of environmental impact. But the parents raised many objections about cost, utility, timing and so on. Eventually all the objections raised by the parents were overcome, a loan was sought and the electric car was acquired. The son resumed eating. This is an affluent problem and, arguably, a superficial solution, but the point is that the contradictions in the family's behaviour were, to the child, unsustainable. There may well have been other factors at

play here but the fact that a child felt this issue – and the lack of validation from his parents – required such a drastic stance is concerning.

We had a reprise of the conversation about food yesterday and agreed an action plan for you to try to reduce your dislike of vegetables for both the reasons your friend mentioned: because you care about animals and because you care about climate change and want to eat less meat. You know that livestock farming is one of the major drivers of greenhouse gas pollution and deforestation. Step one is having the broccoli on the table. Step two is tolerating it on your plate. Step three is having a taste. Step four is tasting it ten times. Step five is eating a little bit each time. And there's a cash reward ... We've got a list of foods you'd like to be able to eat, even though at the moment you can't face them. In a way this is the coalface of your climate action – and it is for us, your parents, perhaps the most frustrating and terrifying part.

This morning on the fridge there appeared a hand-drawn poster by Cissy of a grinning pumpkin and the legend written above it: 'The World Is Nothing Without Wonky Weird Vegetables'. I love it! If this could be your manifesto your mum and I would be very happy.

CHAPTER 28

She was my best friend

March 2024

Dear Daphne,

This is the hardest letter to write. I don't know what to say. You know the facts already but what you don't know is how much I have thought about it and how much I have learned from the experience. If there is any good that can come out of this horrible episode it is that we have all learned something. I think of your body, Daphne, heaving and sobbing, unable to stop.

Clover was a grey-and-white tabby with green eyes and white paws. She was affectionate but she'd bite and scratch newcomers to our house, but never you, Daphne. She had an annoying habit of sleeping on our faces and your mum and I would shove her away. But you never seemed to mind.

On the terrible day, it was a clear sunny morning. There had been a heavy snowfall of wet snow and we were rushing to get outside and up the hill to go sledding. I had turned on the car to defrost it fifteen minutes earlier and I had seen Clover slink under the vehicle where it was warm. We got in and I called to you, 'Is Clover still under the car?' You looked and you couldn't see her. But I wasn't sure and so I put the car into gear and crept slowly forward. Normally, she will streak away from vehicles – she's a smart cat. As we inched forward there was a bump as if we had gone over a stick, and then Clover shot out and disappeared in the rear-view mirror. Good, I thought, she's safe. But when we came back from sledding she was lying on the front step panting – she couldn't move her hind legs.

The vet did an X-ray and discovered a separated vertebrae in her tail, what they call a 'tail pull' – when a cat's tail is caught and it tries to run. It was a wide gap. She'd suffered nerve damage at the base of her spine. For

two days she was on a drip and under observation at the vet's and we hoped and hoped that she would rally.

Each night at bedtime you would ask me, 'What chance is there that she will recover?' You were bargaining.

'If she can't go to the toilet, by herself, then we can help her, right?'

'What's the worst that can happen?'

'She'll die.'

'But that's not likely at this point, right?'

We went to see her in the cage and she was very sleepy and unresponsive. But she recognised you. She tried to get up and come towards you in the cage, but she couldn't. She gave a faint 'miaow'.

After the second day at the vet's, Clover took a turn for the worse and your granny fetched you and Cissy out of school to say goodbye. She was sleeping but she opened her eyes. She felt your hands stroke her and your tears on her fur.

Later that evening, I collected her still-warm body wrapped in a towel and buried her straight away in the garden. You didn't want to look at her again. You flung yourself sobbing at the wooden door frame striated with her claw marks.

She had slept on your bed every night for four years, since the beginning of lockdown. You would always scold us if ever we said anything untoward about your cat.

Mum was away. You slept in my bed each night that week and cried and cried until you could cry no more and your body let you fall asleep. I would hold you as you sobbed and railed against the injustice of your cat being taken 'too soon'. Cissy wrote you a poem the night we buried her, as if from Clover herself.

'She was only five,' you said over and over.

'She should have been with me until I was twenty, at least.'

'I know it's not your fault, Dad, but it is a little bit.'

On that night, you did not settle until I had finally cracked and was sobbing alongside you. You wanted to see that I was feeling it too: words were not enough.

Again and again, you repeated, 'She was my best friend.'

'Whenever I had a bad day, I would tell her everything and she never judged me like people do.'

Your bed is surrounded by pictures of animals, but Clover was the most important real animal in your life. She was the portal into the animal kingdom. You grew up with her, you defined yourself in relation to her. Your friends know you as a 'cat person' and give you cat-related toys and clothes every birthday. In those two long weeks before you were able to go to sleep on your own and a glimmer of your happy former self returned, it seemed as though you had not just lost a pet but a world.

We talked a lot about grief those days. About how it comes and goes and how it is something we must learn to live with.

'The first experience of grief is the hardest,' you said, with surprising wisdom. 'And I will never forget it.'

I told Caroline about what had happened.

'Grief is love,' she said.

I repeated this to you, Daphne, and you understood it immediately. It is not something to be shunned or got to the end of, but perhaps something to pause with, and hold, to not necessarily enjoy but to cherish: the memory of Clover.

This is a terrible and unnecessary lesson at this point in your life. But living with grief is what we must all learn to do. And in some way you want to, you are ready to. You don't want to forget and 'move on'. Caroline pointed me to a passage in a book she had co-edited, from a chapter written by Judith Anderson and Rebecca Nestor:

Many of us are not in touch with the climate/eco-grief that arises from the long, slow loss of our fellow creatures. Given that climate grief is not the uncomplicated grief that arises from a single loss, it will continue to be with us for the rest of our lives and must become part of the fabric of life to be inhabited, or perhaps to inhabit us.

Losing Clover taught me that I needed to learn from you, Daphne, how to live with grief in an enduring way. It is often an attempt at avoiding grief when people focus on other, less challenging responses to climate change: denial, insistence on optimism or a kind of macabre insistence on the certainty of collapse, or writing a book about feelings instead of actually feeling them, for example. As the other side of love, it can remind us of our relationships, of what's important: it keeps us up to date with where we are

by helping us to remember. It connects us to the world and to other people. Caroline told me to tell you this:

Grief is love: if you deeply love, you grieve forever. It is an honour and a pleasure to grieve because you have loved. It is a gift. Think of the love for the cat, rather than the loss of the cat. The size of your grief is a measure of your love for the cat. You should be proud of being able to love that deeply and that fully. That love is forever.

Grief, like love, breaks you open to the world. A heart that does not grieve cannot learn. As you grow up you might see this relationship between grief and learning yourself. Grief ages you, it makes you wise.

I have a little theory based on many years of human rights reporting in prisons, war zones and refugee camps, that a traumatised sensibility is more aware, is able to see more clearly. It is why refugees are so often innovators and philosophers – they have seen the edge of the world, the break in the fictions we live by.

In her book *A Paradise Built in Hell*, Rebecca Solnit describes the unlikely triumphs of solidarity, community and social justice that emerged in the wake of five specific disasters, both man-made and natural. Her stories show what extraordinary circumstances can call forth from ordinary people; and, importantly, that grief, struggle and challenge are not necessarily negative experiences to be avoided if at all possible, but part of the kaleidoscope of human life. They are often the key to new ways of thinking and being; new identities and new formations of social life. Just as in natural ecosystems, disruption is the engine of evolution. Coming to our senses and seeing our situation and our opportunities clearly now at this point in history means grieving the life we have had up to this point and all the things we've taken for granted.

I will often think of Clover and what I have learned from your experience in facing her loss and integrating that grief into your daily life, Daphne. The way you always pause before her grave to say goodbye before we go on a trip. Or, when you are feeling low, the way you go and stand there and chat to her. I have tried to learn from you: in confessing and owning what I am afraid of, what I am sad about, and not shying away from the sorrow but being brave, like you, and walking towards it. I am beginning to understand

now what it means when people say that only when we have done the hard work of grief can we reclaim the meaning of hope.

CHAPTER 29

If I were a shoemaker ...

April 2024

Dear Daphne,

It's been over a month since Clover was put down but the scar is still fresh. It's a good thing that we had the past weekend booked in already. It was something to take your mind off it. This is the second year we've done this: devoting a whole weekend to each daughter and inviting you to set the agenda for what we're going to do. We had the discussion at New Year where we talked about resolutions and you said that for your weekend with me this year you'd like to climb the UK's highest mountain, Ben Nevis.

We took the night train to Fort William in Scotland. We woke up on Rannoch Moor with a view of snowy peaks in the distance and lost valleys in the foreground. The sky was clear, as is not often the case in the Highlands. You were energised at the possibility of a view from the summit – although I'd warned you the summit is rarely clear.

We talked about so much I can't remember it all. You tried to teach me Welsh (again) but even the first few lines of the national anthem would not stick. We talked a lot about your friends, and the struggles with being oneself in company. But the subject that occupied most of the climb up to the bottom of the north face was a very long answer to a single question.

We walked from the train station up through the steep forestry track until we stopped where the stream off the north side of the mountain plunged into a deep pool. We felt in need of cooling off. We ate our sandwiches early and admired the majestic bowl of the north face of Ben Nevis. It looks like one half of a round dome that has been blasted off – and indeed that is what happened 350 million years ago when the volcano collapsed in on itself. The track was wide and well surfaced and wound up through the glen

beside the stream. It was a warm spring day and we met almost no one. I was sweating and the pack was hurting; not only was I carrying all our camping stuff and food but extra warm layers and an ice axe for the top that was still covered in deep snow. The summit of Ben Nevis can hold its snow until June.

You found it hard to reconcile the temperatures in the valley, walking in T-shirts while looking up at the snow that we could see crowning the mountain in the distance, but it was the rocks that were the defining feature of the landscape. We walked over fissures and pebbles on the ground beside boulders that had tumbled from the sheer faces high above, and before us the towering crag rose ahead shedding scree like water.

‘How does climate change affect the rocks?’ you asked.

‘The rocks? Gosh. I don’t know,’ I said. ‘It might increase the rate at which they are weathered by the rain and the wind – the process of turning them into sand.’ And we took a close look at a boulder speckled with orange lichen like a disease, the lichen slowly dissolving the minerals in the rock to feed itself.

‘But they’ll still be here?’

‘Yes, of course.’

It’s a sign of how normal the topic has become for us, or, some might say, a sign of how – perhaps unusually – immersed in the subject you have become. I suppose it’s a bit like the old days when children would become apprentices in their parents’ businesses, and skills stayed in the family. If I was a shoemaker, you’d be one too. And so, since climate change is my personal (and now professional) interest, it makes sense that it should loom large in your view of the world.

We walk in silence for a little while, admiring the sunshine on the valley, the clouds revealing then closing over the peak and the rushing stream by our side.

‘Dad, didn’t they know?’ you ask me.

‘About what?’

‘About climate change?’

‘Who?’

‘People.’

The answer took up the rest of the trail all the way to the Charles Inglis Clark memorial mountain hut – the CIC hut. I’m not sure how much sense I

made sweating and pausing so I'm going to try and write it down so you can refer back to it at some point.

I talked about the suspicions of some people right from the beginnings of the invention of the steam engine not far from where we live in the coal valleys of Wales. The findings of the American scientist Eunice Foote in the mid-nineteenth century and the hypothesis relating to the role of carbon dioxide and the burning of fossil fuels in warming the atmosphere formulated in 1896 by the Swedish scientist Svante Arrhenius.

'But most people had no idea,' I said. 'Ask Grandpa!'

I explained that oil companies did research in the 1950s and 60s which first suggested the scale of the problem that would arrive if we did nothing, and that their models predicted with startling accuracy where we are now. And I explained that the oil companies then hid this information from the public for many years and we are still in the process of uncovering what they did and didn't know.

'That's wrong!' You were rightly shocked.

I told you that climate change was commonly understood by the 1980s, when I was a little boy, although I had no sense of it then. We worried about 'nature', especially the rainforest, the ozone layer and overfishing, particularly whaling, but not about climate change as such. Rachel Carson had warned about pesticides and toxic chemicals back in 1962. But all of these were seen as specific problems that could be solved.

I told you about NASA's James Hansen warning the US government of the 'greenhouse effect' back in 1988, when I was fourteen, although I don't remember that. I told you about George H. W. Bush and Margaret Thatcher making promises and the big United Nations Earth Summit in 1992, which I do.

'Why didn't they do anything about it?' you wanted to know. I tried to break it down in three parts.

One, part of the answer is that the oil companies worked hard to stop governments taking action. They sponsored politicians that promised not to limit their activities, particularly in the most powerful country on earth, the United States. And what happens in the US shapes what happens in other countries. There was a proposal in 2000 to classify carbon dioxide as a pollutant which Al Gore and George W. Bush had both committed to introduce if they were elected president but Bush went back on that promise. That was a key moment, but it's not the whole story.

Two, part of the answer is also that change is tough. Since the Industrial Revolution of the mid-eighteenth century we have developed industries that rely on fossil fuels – energy, manufacturing, transportation and agriculture – and it is always easier to keep expanding what you know, what is cheaper. Until very recently, this was seen as progress. Much of the modern world is hardwired to use these industries and systems – and change now requires changing not just the technology but also the habits and supply chains that have been built upon those foundations.

And three, the final part of the answer is that our politicians have failed. They were not brave enough when they needed to lead public opinion instead of following it. They were afraid of banning petrol cars, taxing flying or making fossil fuels more expensive, or limiting deforestation or over-consumption, all of which might impact on people's jobs. In short, we have built a system that is unsustainable and the job of untangling it is huge!

Politicians could have made that tough job easier by doing what the UN asked them to do, and what nearly all countries have in fact committed to do, which is to educate the public about climate change according to Article 12 of the Paris Treaty. But either due to pressure from fossil fuel interests or else just cowardice and short-term thinking (they would not be re-elected if they were unpopular, and these things would be unpopular!), they didn't do it. And the longer their inaction goes on, the harder the changes that we need to make have become as many people don't even accept the need for change. People can react in angry, fearful ways at even the suggestion of change ('you want us all to go back to living in caves?!'). That's why now even small changes spark big protests, like some farmers in parts of Europe blocking roads and protesting in the street.

'Politicians are idiots!' you said, and we laughed.

'Well, yes! But ...' I tried to point out they are not necessarily bad people but are prisoners of a political failure that has been building since before Grandpa was young, since before his father was born even, at the end of the First World War. We have enjoyed the fruits of industrial 'progress' while the consequences have been repeatedly kicked down the road for future generations.

Successive generations of politicians either didn't care or they thought there was always more time. They hoped that the ones who came after them would be the ones to deal with it. Some tried more than others. Margaret

Thatcher was one of the first to raise the alarm in the 1980s along with Jimmy Carter in the US. Gordon Brown in the UK in the 2000s made every government department prepare a climate adaptation strategy and had a person in the Cabinet office to coordinate them all. But those plans were abandoned by the government that came after him.

As I am coming to see it, this is not a recent crime of environmental negligence for which one or two previous generations are uniquely accountable. It is not my, or my parents' 'fault' in that sense. Climate change is rather the latest phase in the historical unfolding of capitalism and colonialism. A process of changing our landscape and exploiting nature for material gain that has its roots in political, legal and economic developments in medieval Europe when nation states first began to experiment with private property, enclosure and then colonisation as the profit motive was increasingly accommodated as the engine of 'progress'.

This process has gathered pace in particular over the last 100 years and is now pushing earth's systems beyond their natural limits. During the last two decades there might have been a chance to change course and electrify our energy sources, reduce emissions and restore nature – or so it seems in theory. But if you read the histories of this period, such as James Hansen's book *Storms of My Grandchildren*, his account of being in the room with President George Bush and Vice-President Dick Cheney in 2001, and the way that the White House censored his research with NASA, common sense had no chance against the accumulated might (and historical force) of the oil industry.

The overwhelming of proper, ethical systems of government by special interests and compromises with the oil industry is part of this story too, not an aberration. President Barack Obama was not immune from the same special interests. He propelled the United States to be the world's fracking capital (the process of injecting water into the earth to force more oil and gas to the surface that won't come up under its own pressure) even while he also passed the American Recovery and Reinvestment Act, a \$90 billion injection of cash into renewable energy, stopped the Keystone XL and Dakota Access Pipelines and protected millions of acres of land from drilling. As Hansen said, he wanted to negotiate, but you can't negotiate with physics.

There might have been moments when things looked like they could have gone differently. For example, if George Bush and Dick Cheney had not

been elected, or if Gordon Brown had prevailed in the UK ... but in truth, the science never really had a chance, this was always about more than just emissions: it was about the structure of an economy and a global world order based on hydrocarbons. And we are all victims of that system.

There are already books written about the history of warming and humans' complicated psychological inability to address it. It will be a rich source of study for many years to come, I am sure.

This was hard for you to make sense of. At this point, the thread of the conversation was dropped. It is so obviously nuts to you that humans should have failed collectively to rise to the challenge and instead are bequeathing to you and future generations the prospect of melting glaciers and a surface of the earth transformed.

We got into the tent after I had cooked what you called 'the worst spaghetti carbonara the world has ever seen' and we looked down the valley at the sun setting over the Hebrides.

The following morning we resumed our climb and came up to the summit via the Càrn Mòr Dearg arête, popularly known as the CMD arête. It was a very serious climb, especially for a ten-year-old. You kept wanting to know if you were the youngest person to attempt it and despite looking it up later we can neither confirm nor deny your achievement.

When we got to the top, the summit was bathed in sunshine and the cornices of the north face glittered like a baked Alaska. You couldn't believe it. The towering walls of ice and the ski mountaineers, having hiked up the normal route, launching themselves down the couloirs. Inland was a Himalayan scene, with rank on rank of snow-capped mountains under a clear thin atmosphere. In the other direction was a perfect Scottish view with clouds scudding over the peaks of the Western Highlands and out to sea.

'There's loads of snow!' you remarked, as if I had misled you somewhere. 'This is going to take ages to melt!'

When we set off down the wide 'motorway' track as you called it triumphantly, passing dozens of eager walkers after seeing almost none the day before, and none on the CMD arête at all, we were both on cloud nine, soaring like eagles, on top of the world. Whatever climate change might have in store, it was not going to stop our father-and-daughter mountaineering adventures.

'Next year we're going to do Mont Blanc,' you said.

CHAPTER 30

Not the easy-peelers!

May 2024

Dear Daughters,

Caroline is coming to visit with her dog Wilfred and I must admit I'm nervous. When I told you she was coming specifically to meet *you*, you were alarmed. Why? You wanted to know. What does she want to talk about? When I explained that she was an expert in speaking to children about climate change and she wanted to know about your experience of talking about it with me, you were willing but hesitant.

'The problem is,' said Daphne, 'it troubles me to think about it.'

'OK,' I said. 'And you, Cissy?'

'No one wants to think about it!' You were emphatic. You said that whenever the topic came up your friends always change the subject. This threw me quite a bit.

For several years now, recently validated by Caroline and the work of the Climate Psychology Alliance, I have held to the idea that talking about climate change openly with you is a good and necessary thing. Suddenly I began to doubt that position. How much research was there really to support the idea of talking to children as positive? Would ignorance in this case be better? You might just find out about things slowly, as an adult, and come to your own conclusions. Would that be preferable?

But that thought offered comfort for less than a minute. You know about it anyway – as you have clearly shown me, I am not the only source of your information. When a friend and I were comparing notes she asked, 'When is the best time to have *the* conversation?', as if it were a case of having a single big talk, like the old-fashioned idea of 'the birds and the bees'. But how can you have a single conversation about a world?

When I was young, Granny and Grandpa laughed about their parents' attempts at 'that' conversation and instead encouraged us to ask as many questions as we liked about sex. That was liberating. I hope you feel the same way about how we have navigated this. Just as with sex, the goal of talking about it is to *normalise* it, not to overwhelm you. But now I worry that by inviting Caroline to talk to you that is exactly what I'm doing, forcing you to talk about it.

When I asked why you didn't like thinking about it, Daphne said: 'Just like we don't want to think about death.'

'That's interesting. So what exactly are you afraid of?' I asked.

'I'm scared of the unknown,' said Daphne. 'I don't know what's going to happen.'

'I'm scared of pacific [*sic*] things,' said Cissy. 'Like the animals dying, the people dying and the end of the world.'

It seems that you had understood enough to know that it was a topic best avoided. All I had succeeded in doing was scaring you enough to disengage. Brilliant! You had beautifully illustrated the dilemma: no one had told you what this scary idea might actually mean in practice, in concrete terms, *for you*. This is the problem I come across all the time at work, in the college, it is one of the central things we do: run scenarios to engage the imagination – in detail. The goal is to demystify, to make real. And yet I had not done this with you. And of course in the imaginative vacuum, all sorts of apocalyptic ideas had taken root.

It seems instead that the future has become a scary place that you don't want to visit. What does this mean for when you talk about your ambitions to be a poet or an artist or a musician? How do you hold those ideas at the same time? That must be tricky. In terms of worldview this is huge. What does childhood mean if the future does not exist? The idea of you simply not thinking about the future because it was too horrific to dwell on is heartbreaking. How many other children are there in the world, restraining their imagination from journeying too far into the future? I was beginning to see the scale of the mental health disaster that could be hiding in plain sight.

At Black Mountains College we ran a workshop for professionals from a bank based in the City of London in which we asked the participants to role play future climate-impacted scenarios where they would have to make difficult decisions that they would rather avoid. Afterwards, several of them

commented on how hopeful they had found the exercise; it had allowed them to face the future and think it through, in the process demystifying it and making it less scary.

‘It wasn’t that bad,’ one said, despite the fact that the scenarios everyone chose from their imaginative stores were quite catastrophic ones.

So that’s why I tried the same thing with you, going through what we know and what we don’t know.

‘Would you like me to tell you a bit about what we do know and don’t know about what’s going to happen in the future, so you can be less scared of it?’

‘It’s the difference between a rational and irrational fear,’ said Cissy, proud of her wisdom.

‘Yes, exactly,’ I said. ‘And I’d like to help you to be rationally afraid of the right things and relaxed about things that are not going to happen.’

‘Like spiders?’ said Daphne.

‘Yes and no.’ I hesitated because, as someone who suffers from arachnophobia, I understand, Daphne, that you don’t want anyone to try and convince you that your fear of spiders is irrational. You know it is, but that doesn’t help.

‘All right.’ Daphne, you put your hands over your ears and grimaced, while you, Cissy, looked up expectantly as if anticipating a good disaster story.

‘To start with, the seeds of the future are already here,’ I said. ‘The seasons changing that you know about. When I was young we almost never had droughts and heatwaves in the summer and floods in the winter. The cold snaps that you have seen – minus 10 and so on – were also rare. So the swings in temperature will keep getting larger and more unpredictable, and more stormy.’

‘If there’s a tsunami, will it get us here?’ Cissy, you wanted to know.

‘No, we’re high above sea level where we live.’

‘Oh.’ You sounded almost disappointed.

‘One thing you will probably start to notice are prices, for example of food. Things that grow or are produced in southern Europe like olive oil, oranges and pasta are getting more expensive already. It’s getting harder to grow food in some parts of the world.’

‘Easy-peelers?’ you asked nervously, Cissy.

‘Perhaps.’

‘No!’

‘And that will spread to here!’ you said, Daphne, quick to assume the worst.

‘Yes. We are already seeing some of those effects. But most of our vegetables are grown in greenhouses, in controlled conditions in Spain and Holland and the UK. For now, it’s more a question of how the food is moved around and who has the money to buy it.’

‘So we might have to share, like Granny,’ said Cissy.

‘Yes, that’s possible, like Granny had rationing at the end of World War Two when she was small. We will almost certainly have to grow a lot more fruit and vegetables here in Wales. For the moment, we are lucky where we are. In some parts of the world shortages like that are already a problem, and not just because of climate change.’

‘So the world is not going to end,’ Daphne said. ‘Nature will go on?’

‘Yes.’

‘But the sun is going to turn into a fireball ...’ Cissy has a healthy catastrophic imagination.

‘But not for a billion years,’ I said.

‘Billions,’ corrected Daphne.

‘OK.’

Then we talked about black holes, Elon Musk’s satellites, and the impact of the floods and fires that have been on the news. The conversation moved naturally on to other things, as it should, and the looming uncertainty of advancing climate change slowly settled into our family imagination; becoming a little more real and a little less scary at the same time, or so I hoped.

What we didn’t talk about was the human dimension. Something I hope we might cover soon when you are a little older. Ironically, thanks to science, we know the physical dimensions of how the earth will respond to warming – we even have models of the various climate tipping points. And we have a reasonable guess as to when these impacts will start to become severe, ranging from now, already, to the end of the century: all potentially within your lifetime. We know that sea-level rise is locked in for centuries and that we can expect at least a metre if not two or three this century. We know it will get a lot warmer in most places, that deserts will grow. But that the UK might get dramatically colder if the Atlantic system of currents collapses. Regardless of that, we know that rainfall will be a lot more erratic

and heavier than infrastructure can cope with. But how the human systems will respond is the biggest uncertainty. And here the legacy of war in Africa is an interesting case study – we have examples of collapse. And these can help in that task of ‘making it real’.

It’s fashionable to talk about the ‘collapse’ of societies or of ‘civilisation’, whatever that means. I see it as an unhelpful word because how complex societies and economies unravel is unique to each location. In places with an ad hoc or minimal government like the Democratic Republic of Congo, Somalia or Sudan, the details of daily life in the midst of or in the wake of a war are not described by the word ‘collapse’ – it suggests an abrupt change, an ending of things. But what is interesting and unusual about war zones in so-called ‘failed states’ is what continues and endures and what new arrangements emerge instead. The authority of the government or state dissolves. The economy changes: value in some areas collapses, prices go haywire but supply and demand reasserts itself in other ways and people find new currencies; whether the inflated old ones, US dollars or commodities like tin, gold, cattle or even bananas. But society endures. Throughout Congo, the churches offered safe haven during the war. In Somalia, the mosques became the courts after the civil war of the 1990s. In the informal refugee camps of bombed-out Mogadishu, the residents self-organised and elected representatives to challenge the warlords and the UN on their behalf. By looking in detail we can locate the opportunities for hope.

I’m sure no one wants to imagine living in a refugee camp but the point about my book on one of the toughest camps out there, Dadaab, in Kenya, is that life goes on. There is still work, and love and birthday parties and weddings. Whole lives unfold there in difficult circumstances but they are still meaningful lives that we (increasingly) have much to learn from. There are millions of people on this earth whose world has already ended. And seeing life through their eyes and their stories is perhaps one of the most helpful things you can do to make sense of our predicament and gain faith that humans can be good people even in the most difficult circumstances.

In the end, Caroline came. We played with her lovely dog and I left you alone with her for half an hour, slightly nervous about what you might reveal. Afterwards neither you nor Caroline gave me any clue. You just winked and said it was private. But a few days later she sent her version of what you said:

Climate change could destroy the world and we are at the start of our lives in the world, so we have a lot to say about that. We know that we can't stop it now, we have learned that, but we can slow it down and stop making things worse.

Sometimes it's annoying when Ben talks about it to us, even after we have asked the question! He blathers on about it a lot. But then, it's also good to hear what he knows, it helps us work out what we think, and feel. Some of our friends are obsessed with climate change, sometimes they don't know much about it (or get things wrong), everyone we know at school knows about it.

It's a scary thing, but if you think that wars are scary, they are small things compared to climate change. So, we do need to know about how to think about it, like wars. Not good things, but they are happening. There should be much more about climate change in the news like there is about wars, then we might be able to get people to care more about it. People don't know enough about it which means they can ignore it or pretend not to care.

He's a good dad, he's funny, he's kind, but he farts a lot!

He spends a lot of time in his 'man shed', he uses it for writing, he gets a bit grouchy sometimes, but that's when he's writing and he has to be grouchy with it sometimes. Daddies often don't understand little girls, no, definitely not! But Ben tries to understand us. We like his name, Ben, it suits him.

We play a game called 'tackle Ben' when we wrestle him to the ground. We specialise in spring attacks when we spring on him. It's good!

He always tries to listen to us and what we say, and he answers our questions (sometimes for a bit too long!). But he is good at trying to understand a children's view of climate change, that's better for us.

We lay out traps for our parents sometimes, with string and Lego so they are caught in the middle of the night. It's very funny!

He should talk with us about all these things, even if it's a bit boring sometimes, we always learn something, and realise afterwards how useful it was. We're glad he tries to get it for us. It helps when it feels scary.

It was a validation of sorts, and a reminder that this conversation will never be complete, it will never be 'over'. Huge change is part of our time together on this earth. I have an urgent desire to wrap you in my arms and take you back in time like in the Squid and the Whale stories but I can't. And you wouldn't want that either: the world to you is still new and exciting even if it is flawed. I can live with being boring and blathering on, as long as you know that I am trying to 'get it' for you; that I am here to ask questions of and with. And I'm glad that that helps when it feels scary. That's as much as any parent can hope for, I think.

CHAPTER 31

The trauma of David Attenborough

November 2024

Dear Daughters,

Your primary school is great. I love the fact that you now speak Welsh fluently. It has given you a completely different relationship to place: you know the names of all the hills and rivers, and you can relate to them like friends. Y Das, the haystack, above our house, is *your* mountain. Cissy wants her ashes scattered on the top when she dies. It also gives you a different way of being British – one that is more connected to the islands' original inhabitants, the Brythonic Celts that migrated from the Iberian peninsula at the end of the last ice age. The Welsh language and myths are not that far removed from those Celtic traditions. When we cross the Severn Bridge the wrong way into England, '*Lloegr*,' you groan. And it means you are somewhat aware of colonialism as a historical force with tangible consequences, not just something that happened once upon a time in India, Africa or the Caribbean.

Daphne, you love school and can't wait to get there in the morning and will often try and convince us you are well even when you're not. You don't want to miss a day. But, Cissy, you started this term less enthusiastically and now you've asked for flexi-schooling. I don't know where you got the idea from, or even the word. But you've made a strong case: you want to spend more time on specific topics. When you write poems at school you often have to stop before you've finished – because your epics don't fit into the allotted time. You want to do more science. You say that the session on the water cycle was too brief and there was more you wanted to understand.

We've discussed with your teachers and they agreed to letting Mum and I homeschool you for one day a week. I was nervous of my ability to commit

the time and to find enough to do, but that, it turned out, was the least of my worries.

The first thing you wanted to focus on was the ocean. We spent one week doing the marine food web: who eats whom. And another doing a more in-depth version of the water cycle. You also joined me in testing the river that runs through our garden. We are part of a citizen science project to monitor the health of the River Wye catchment, measuring the temperature, sediment, nitrate and phosphate levels in our stream so that the team can see where pollution is entering the system.

This was going great and was very positive, despite the spike in phosphate that we detected that made you concerned. We walked upstream and found a field heavily overstocked with sheep where the river was not fenced off from the animals and we theorised that the elevated phosphate levels were due to that, although we couldn't be sure. Since then, you're now keen on pointing out fields where excess numbers of sheep have turned the green grass to mud. You're learning to see the ecosystem as a whole and the link between the land and the water, which is amazing.

Strangely enough it wasn't this lesson that proved distressing. As part of the theme of study we started watching some nature documentaries. First up was Jacques Cousteau's *The Silent World* from 1956. We mentioned it to Grandpa who had watched Cousteau on the TV in the 1960s. Cousteau was a sensation with his underwater cinematography bringing the ocean into people's living rooms for the first time. It turns out, though, that this was a mistake. *The Silent World*, as Cousteau himself admitted later, was of its time, and out of date. In it, the crew ride giant tortoises, cling on to turtles and humpback whales to swim with them and even accidentally run over a baby sperm whale with their ship. At that point, you ran screaming from the room ...

I thought we'd try something gentler. In turn, I had grown up watching David Attenborough documentaries about the natural world. In truth, his footage of lions in the Serengeti is probably one of the reasons I ended up going to Africa aged eighteen to teach English, a fascination with the continent that began with the animals. Two generations of our family had grown up on a diet of two television presenters since the 1950s as had millions of other families around the world. These two men were responsible for firing up the imaginations of so many of us, often leading to a passion for nature. And they had both been warning us to look after nature

better since the end of the Second World War. Cousteau's incredible series was cancelled by the ABC television network in the United States in 1976 because he was getting too strident and too dark about pollution and the threats to the ocean – the TV networks wanted light entertainment not activism. Cousteau went on to warn that the ocean had reached a tipping point in 1979, when I was four years old!

David Attenborough by contrast has always tried to tread the path between wonder and awakening very carefully. For many years he studiously avoided any 'bad' news about the planet at all. But in his later life his programmes have become more explicit, more balanced perhaps. We started watching his iconic series *Blue Planet II* in the evenings so that Daphne could join as well. You were both blown away by the footage of coral reefs and kelp forests, octopuses, fish and dolphins. But after the first couple of episodes you got the idea that about forty-five minutes through the episode, the music would change and there would be a segment on human influence that was invariably depressing. A shot of bleached coral, a turtle eating plastic, a pilot whale nursing the corpse of its infant for weeks. At first, you would cover your eyes. Then you would sense the depressing moment arriving and leave the room until it was over. After the one on kelp forests I wondered in my journal whether letting you watch David Attenborough documentaries was a good idea. We had just seen the positive story about the return of sea otters to the North Pacific and their role in eating sea urchins and rebuilding the ecosystem of the kelp. Then the following morning one of the science journals I follow on social media posted a study saying that the Pacific sea otter population had declined by two-thirds in the last decade – almost the time since the *Blue Planet II* programme had been made. I wrote in my journal that perhaps seeing these images of abundant wildlife from nearly a decade ago is misleading – maybe I am allowing you to grow up under false pretences? Maybe, actually, in this case, ignorance is bliss? There is so much talk of nature connection and showing children nature and yet might it be that images of abundance could actually not be age-appropriate because of the cognitive dissonance they invite? This seems a strange conundrum of our time.

Then, the next day we watched an episode on coasts with a shot towards the end of Palm Beach in Florida and ten thousand sharks migrating in the shallows. David Attenborough's voice came on, saying, 'It's estimated that

in the next decade we can expect 10 per cent of the world's remaining wild shores to be taken over by human development.'

'How long is a decade?' Cissy asked me.

'Ten years,' I said.

There were no scary pictures and nothing particularly alarming. You didn't say anything more and we watched the rest of the programme, including the end bit on how they filmed the incredible sequences. It wasn't until bedtime that I realised something was amiss. You were whimpering in your bed, Cissy, face down on the pillow. I asked what was wrong and you said, 'Nothing.'

I said, 'You can talk to me if you want.' But you didn't want to talk with Daphne in the room. I took you into our room and asked what the matter was and you burst into tears in a way that I have almost never seen before: heaving sobs to the extent that you couldn't talk and I couldn't make out what you were saying. Eventually, you managed to get enough air into your lungs to say: 'I don't want all the wildlife to disappear before I've had a chance to experience it!' Then you started sobbing all over again but trying to talk at the same time; there was a lot to get out. I could make out most of it.

'I'm only eight. In a decade, I'll be eighteen ... I keep thinking I'll see these things when I'm older, but I won't have the chance. It's not fair! Why now?'

I tried to explain that this was the moment you were born into the world and me too.

'But you've seen so much. In my lifetime, it will be gone.'

'Not all of it, we've lost a lot of species, but there is still so much left,' I said.

'But it's getting worse, and humans don't care.'

'Some do,' I said. 'There are many people doing their best to protect nature.'

'But not the people in charge of the governments and big companies. The ones in power. They don't care.' I had to grant you that, I had no comeback.

'But we care, and we will do our best.'

'But we're just one family, you're just one person.'

I was floundering, trying to give you the positives but failing. 'You'll be OK,' I said.

‘I’m not worried about me!’ You almost spat the words out. ‘I’m worried about them! I want to help the animals.’ And then you connected all the lessons we had learned in flexi-schooling and threw them back at my optimism. You had understood the interconnectedness of the marine food web completely. You had perfectly demonstrated the quality of ‘thinking like a forest’ at a systems-level view.

‘If the phytoplankton can’t reproduce then there’ll be nothing for the bigger fish to eat and then no detritus for the sponges to recycle and if the sponges go extinct then they’ll be no nutrients for the phytoplankton and then the whole of the ocean will die ... ahh!’ More sobbing. I was stunned but also broken. You’re absolutely right. This is what would happen, could happen, if ocean acidification continues; but this was not something we had studied.

‘OK. OK. It’s sad. I know it’s sad. It’s good to care. The strength of your feeling is a sign of how much you care,’ I said.

In the end I just held you for a long time until the sobbing subsided. Then I carried you back to your bed and Daphne had the last word after we told her what you were upset about.

‘Animals come and go and new ones evolve. I try not to think about it. I try to focus on my daily life. If you think, the universe is a twenty-four-hour clock. We think it’s billions of years but for the universe it’s just a millisecond.’

I normally find solace in that wider time horizon. It seemed to work for you both since Cissy calmed down and went to sleep. But that evening I didn’t.

I went outside in the freezing-cold night, looked at the stars and drank a whisky. I was very shaken up. And asking myself lots of questions. Was it a mistake to show you David Attenborough, to let you fall in love with things that were time-limited on this earth? Would it be better to simply let you play video games and develop attachments to robot toys? Was that perhaps a more realistic vision of the future to which you should be acculturated? What kind of culture is even viable? I felt my whole identity and purpose as a parent fall apart. Was I approaching parenting as a selfish, intellectual exercise: teaching you about things I wish I had known as a child that might have made a difference four decades ago but which are essentially redundant now?

The injustice of the destruction of the biosphere hit me afresh. Over 80 per cent of wild animal numbers that existed when I was born in the 1970s have gone in my lifetime. The vast majority of carbon pollution has been emitted over the same period, with over half since the year 2000. And the same with plastic. This is such a recent acceleration in destruction. Cissy, you are right, it is very unfair. Why should you be coming of age at a time like this, into this kind of knowledge? You are not suffering physically at all. Your material needs are better taken care of than for any previous generation on earth. But, psychologically, it is an incredibly cruel reckoning to be asked to make.

I talked the episode over with friends and with Caroline. My friend said she doesn't let her kids watch nature documentaries for precisely this reason: the dissonance is too distressing. Plus, her husband forbids her from talking to her children about climate change even though she spends her academic life grappling with almost nothing else. Perhaps you'd prefer it if I did that from now on? I suppose, like the clear-felling of the forest near to our house, the examples of animals are real, concrete, tangible. 'Global warming' is abstract and only brought to life when things we love are threatened.

Caroline smiled ruefully when I told her that you had knocked me down repeatedly, demolishing my positive spin. She was impressed.

'She is saying, "tell me the truth, don't bullshit me, Dad",' she said. She called your response to the programme powerful, appropriate and healthy even if it was traumatising for me.

'It should be traumatising!' she said. 'No one wants to see their child suffer like that. That's why they pay me to talk to them!'

She also pointed out that eight is a particular moment in a child's development: it is the point at which we become aware of time and space, the wider world. You are thinking of yourself as an eighteen-year-old in the world, relating to the world. It is, in effect, a loss of innocence. And when the cocoon of innocence breaks, it breaks all at once. When there is no way to reconcile the images and the feelings. This can be the same for adults with climate too – when they finally 'get it'. It can be very affecting, she said. It was!

She smiled at my positive stories because it is also typical. It is the first instinct of any parent, to try and protect the child, to lift you out of despair. But that's not the goal here. Caroline pointed out that what a child needs in

that situation is for the parent to tolerate the distress of the child, to go there with you. She said it is a sign of a healthy and safe relationship that you were prepared to show your distress. When a child doesn't feel safe, they shut down. I found that quite scary. How many kids are out there joining the dots and coming to the same conclusions as you and suffering in silence? I suppose that's what Caroline's research is about.

'You had to go through this with her,' Caroline said. She meant that, in order to be able to parent you in future, I needed to feel the grief too. This is a journey we are both on, she said, we are cycling through these emotions and responses together. There is no stable state where we get to have it all figured out.

Philosopher Timothy Morton says this concept, this predicament, is like a 'hyperobject', something that is too big to grasp. Or, as the Icelandic writer Andri Snær Magnason calls it, a 'black hole' absorbing all meaning. Climate change and the outsize human influence on the earth resists any attempt at definition or control; this shape-shifting era is inherently unstable and shrugs off all my attempts to keep it boxed in for us both. If I have learned one thing it is this: we are now riding an emotional and geological rollercoaster that we can no more control than the weather. The only thing I know for sure is that I'll be holding your hand for as long as I can.

CHAPTER 32

What if we all wore woollen clothes?

December 2024

Dear Daughters,

The day after Cissy's outburst, I was still reeling and questioning everything. But you both seemed fine and went off to school perfectly well. I went to collect you off the school bus and the first thing you said to me, Cissy, as you came down the steps and flung your school bag and coat at me, was:

'I want to bike to school from now on. I won't travel in the black car [a diesel one]. And I won't eat fish anymore either.'

'Is this because of the David Attenborough programme?' I asked.

'Yes.' And then you were off playing with your friends by the riverbank by the bus stop as I stuffed your things into the (second-hand electric) car.

Later, we talked about the feasibility of biking to school, how long it would take – it's six miles over some serious hills – and we agreed to give it a try at some point. Boycotting the black car is easy enough, and so is refusing fish although your mum might not like that so much given how limited your diet is already. Mum is going to be cross that I've managed to engineer such distress and disruption in the two short weeks she's been away.

But I think that's part of the point of your reaction: it seems impracticable precisely because we have built such unsustainable systems that rely on hydrocarbons and extractive practices (like most industrial fishing). I suspect many of these pronouncements won't last all that long, but the point is that you are totally right: we should be aiming towards a way of life that does not rely on fossil fuels.

The following day we had a very different conversation on the way to school.

‘Can’t we stop global warming just with a big pair of sunglasses for the world?’ you asked, Cissy. Daphne laughed. I explained that there were people looking into that, that it was called ‘geo-engineering’.

‘I don’t understand why we can’t just live without fossil fuels at all,’ Daphne asked.

I explained about oil’s ubiquitous role in modern life: polyester, trains, planes, cars, plastics, heating, ships.

‘You can take electric trains,’ Daphne said. ‘What if we all wore woollen clothes, and animal skins?’

‘Yes,’ I said, warming to the thought experiment. ‘And we’d have to live within walking or biking distance of the school and the shops. Food would be much more expensive. The cost of living would go up a lot. We’d only be able to buy what we absolutely needed. No toys, or else only ones we made.’

‘And our grannies could teach us how to knit so we could make our own clothes,’ said Cissy.

‘And you’d have to learn how to grow food, how to bake, how to preserve food,’ I added.

‘And we could go on holiday on sailing boats. Or on bikes,’ said Daphne.

‘Yes, it would take a long time, but we’d enjoy the journey.’

‘Sounds fun!’ said Cissy.

‘That’s not so bad,’ said Daphne. ‘Why don’t we do that? We can manage without toys.’

‘And we could live in the forest and relearn the ways of our ancestors,’ said Cissy.

‘When there were tribes!’ said Daphne.

‘And we’d eat the other tribes!’ said Cissy.

‘No, not that part,’ said Daphne.

I agree, not that part. But all of the rest is very possible – in theory – even if almost impossible to imagine in practice. And it would not need to involve deprivation. We could be just as healthy and comfortable. You are clearly more able to imagine this alternative than our politicians and so-called leaders. And can see the inherent meaning and joy in it – even if it costs more money. The thing that most of the people in favour of delay and against radical change cling to as a reason for not kicking the fossil fuel

habit is the cost of living that is too high even at present for many to meet their basic needs. But what they miss, and what you instinctively understand, is that it's not the cost that's the issue, its fairness and distribution. If food was expensive but we all had enough. If heating was expensive but we were all warm. If housing was a human right not a function of inherited wealth or postcode lottery.

Julia Steinberger, a professor of ecological economics at the University of Lausanne, has conclusively demonstrated that we have enough resources in the world to give everyone a decent standard of living without exceeding planetary boundaries – if only things were shared out more fairly. This does not mean going 'backwards'. Mark Jacobson, a professor of civil and environmental engineering at Stanford University, has, for more than ten years (!), amassed a body of evidence showing how every nation on earth could transition to 100 per cent clean energy in a short space of time and yet governments fail to act. Plenty of other academics and experts (for example people like Ashley Dawson and Chris Smaje, and organisations like the Landworkers' Alliance and La Vía Campesina) have demonstrated how food security and localised small-scale agroecology working with the grain of nature are not only possible but can feed us all. However, in each arena, special interests and lobbyists have captured our leaders.

Taken together, there is a plethora of solutions that constitute a compelling picture of how things could be otherwise. Many of these are collected in a book called *The Solutions Are Already Here* by Peter Gelderloos. Far from being a miserable picture, this could be a much fairer future than at present where so many are hungry and homeless. But the point about a fairer future is that wealth would be more evenly distributed and the super-rich would not be able to accumulate so much: this is why they resist attempts at redistribution, this is why they have made 'socialism' a dirty word in the United States. And a big part of the pushback against the transition to a cleaner economy is that the obvious, proven solutions involve state intervention on a large scale that would go against the prevailing culture of profit above all else.

I have been reading a fascinating book called *The Capital Order* by Clara Mattei in which she tells the story of the British and Italian governments' roles in the First World War when the state intervened to set prices and wages, take over whole industries and supply chains and, ultimately, organise social housing, welfare and healthcare. After the war, in 1919, she

quotes Christopher Addison, the Minister of Reconstruction at that time, writing to the post-war Cabinet in support of his spending proposals: 'It would be no defence to say that vital proposals were not enacted for want of money. Nobody will believe it.' That moment, when the state controlled 80 per cent of the economy, was a high point of efficiency as well as fairness in the basic distribution of things. Another world is totally possible. The only thing holding us back is our imagination and our ability to inspire others to imagine it too. Your imagination is alive and well. May it blossom and grow!

CHAPTER 33

I am Octopus

December 2024

Dear Cissy,

It's been several weeks since the *Blue Planet* incident. It is the last Monday before Christmas, the last Monday of term and our last session of flexi-schooling. We have returned to the water cycle and the ocean – connecting the role that decaying phytoplankton and chemical compounds from trees play in condensing water vapour into rain. This is an important lesson: the water we need relies on biology, not just physics, in order to be transformed from salt water into fresh.

In the afternoon, you asked to take a break from science and to write a poem instead. We didn't talk about climate change at all this week. We didn't talk about the sentience of animals either, the world of meanings beyond our meagre human intelligence. Nor did we talk about hope – a thing lots of people are looking for at the moment. And yet you conjured a poem about all of these things. Even for a precocious and talented eight-year-old, I still found it remarkable.

Your poem demonstrates both the awareness of the situation and the emotional way through. The empathy from the animal's eye view is precisely the way we should be looking at the world, it is the right ethical framework: to consider our actions as a species in light of their effect on other species. This is the basis of human ethics in most cultures that have persisted for humans' short sojourn on this earth. Your placing of faith in the fact that life, and Mother Nature, will endure, whatever the outcome of our human folly is also correct. If we are looking for solace in our current predicament, this is where it is to be found. But the most profound

realisation that I took from the poem – and I don't know how intuitive or intentional this happened to be – was what the octopus's attitude implied.

Until the advent of modern medicine, when we were sick and needed healing, when we didn't know what to do, in the end it is to the animals that we turned and to the humans that can channel and talk to them, the shamans. They are the repositories of wisdom, the guides and the pathfinders, the ones that can show us the way. The octopus, I found out later, is revered in many cultures as a wise and healing animal.

Your poem pointed to an understanding that our current moment requires a kind of transcendence in order to resist the contradictions that we can neither fully see nor entirely escape. The octopus has a plan, even though there is no obvious place for one to make any difference, and even though we don't know what it is. Yet, we, and he or she, must try. And all we can do is surrender to the wider forces of life, of which we are a part and, in the darkness of our soul, listen and follow. Our hope is all we have and to try is all we can do; it is what it means to be alive. This is the urgent beat of all sentient life: to try at all costs and against all odds to stay alive and in the process to devote oneself to the service of *all* life.

This struck me as timeless wisdom, of a kind that comes easily only to a child (or a Buddhist monk!). It is a glimpse born of innocence in its first, fresh contact with reality. For me it was further confirmation that learning once again to see like a child is the surest guide to the difficulties ahead.

If I am doing my best to shed my conditioning and learn anew, I am no longer certain what the word 'parent' means from here. With the poem, it seems like a threshold has been crossed. We are learning from each other now. As such a chapter of your lives, or at least the way I see them, and mine, is coming to a close. You are both on your way in the world, our beautiful and wounded world, and you have your own take on it. We are all Octopus.

I am Octopus

*I am Octopus, well that's what some call me.
Others call me names that pulse on the current,
My ancestral name, my true name.
As I jet around the kelp forests and coral reefs*

I hide away in a small crevis to avoid an approaching pyjama shark.

The humans call me one of the smartest animals and are yet to discover

Some of my mystaries and never will.

They will never learn my secret for its mine and nobody else's.

I must stop thinking for prey is near and I am hungry, a crab.

I shrink back into my crevis and wait to attack.

I shoot out my tentacles and watch as

I take hold of its shell and pull it into the crevis,

It crunches and crackles in my beak.

But it is not all success for me.

For my world is crumbling before my eyes in the warming ocean and pollution,

And I hope this not for my children.

They say that all an octopus like me can do is hope,

For I do not have control over the warming seas.

The humans think they are so clever,

But they don't call me the smartest animal for nothing,

For I am Octopus and I have a plan.

CHAPTER 34

Attack of the jellyfish

July 2025

Dear Daughters,

You were not happy about the idea of going to Scotland for our summer holiday. Your friends were heading south, to Tenby, to Cornwall, to France, to the sun. Meanwhile we were going, in your view and Mum's, the wrong way up the M6 towards the wind and the rain and the hills.

It was not warm, but the wild peninsula of Knoydart is dramatic and beautiful. Without roads, it faces the Isle of Skye bounded by Loch Nevis to the south and Loch Hourn to the north. Aside from walking for two days, the only other way to reach the village of Inverie is to take the ferry from Mallaig. Following the example of the first community buyout of the island of Eigg in 1997, the residents of Inverie bought most of the peninsula in 1999 and have been planting trees and trying to restore nature ever since.

We were there at the invitation of the community, for me to give a talk about *The Treeline* in return for a week's camping and the ferry ticket. A chance for you to see some wild nature, and a good-news story, I thought: the story of the forest coming back.

It started well. We met the laconic ranger, Finlay, whom you questioned closely – including about his diet ('I'm a seafood and venison kind of guy') – and who showed us epic tree-planting projects, remnants of Celtic rainforest and early restoration efforts where now the mixed woodland was twenty metres high. Finlay explained why the fences were so tall (to keep out the deer) and that the reason why it's OK to eat deer is that there are too many of them. We had a table at the pub reserved with the name 'Tree Talk Family' scrawled in chalk where you both did your bit to reduce the browsing of the nascent forest by devouring two venison burgers.

The thing I was most nervous about was your presence at the talk. You'd never been to one of my book talks before – I'd always thought it was a bit too scary. But Mum and I talked and decided you could probably handle it now and you had most of the picture already. For a moment, it looked as though I might be off the hook since it was warm by the fire in the pub and you wanted to stay and play cards; but Mum said 'give it a try' and if, like a book, the storytelling doesn't grab you then by all means leave and come back. To my surprise, and yours, you stayed for the whole thing and even asked pertinent questions at the end.

It was a pivotal moment, of sorts. Mum and I have always worried about what is 'age-appropriate'. But there is nothing, now, at least in this arena that I cannot talk to you candidly about. As if the universe had a sense of dramatic timing, the events of the next few days and weeks seemed to confirm the point.

The following day we went swimming in the estuary: delicious peaty black water mixed with salt on the running tide, the crescent bay framed by the Munros of Knoydart that resemble the Matterhorn and the sun setting over Skye and Rum in the distance – when Daphne suddenly jumped. 'Something bit me!' I swam back towards you and felt a slight tingle too, until as we got to shore the stinging grew stronger and you were running out of the water shrieking in pain.

'What? What?' I was asking while Mum was busy trying to calm you down. I was so concerned with you that I didn't notice the pain creeping up my own legs. We both had spiral welts from our toes to our torsos: we had been stung by a jellyfish, and not a small one at that.

The pain starts like a nettle sting and then slowly builds until it throbs like a dozen wasp stings all in a line: a huge wasp sting four feet long. We covered ourselves in antihistamine cream and tried to arrange the sleeping bag so it was not too painful to touch but it was well into the night before you were able to stop crying and eventually fall asleep. I think if you hadn't been crying I might have been a little less stoic. It was nasty.

The next morning, we went kayaking and, looking down into the blue, metre after metre across the glassy bay, we saw hundreds if not thousands of the same species of orange jellyfish floating just below the surface, trailing fine orange filaments up to six feet long. They were lion's mane jellyfish – a swarm of them had arrived on the evening tide. You, Daphne, normally such a keen swimmer, wouldn't get back in the water.

‘Where have they come from?’ you demanded. ‘Why are they here?’

The newspaper the same day had the answer: blooms of jellyfish had arrived in British waters due to unusually warm seas.

‘Climate change,’ I had to say.

Parenting in a stable climate and peaceful setting allows one the luxury of discussing when certain topics or experiences might be age-appropriate. But in extreme or unusual circumstances, things become unavoidable and children must ‘grow up fast’. This can feel unjust. But while we might be able to shield children from uncomfortable facts for a while, after a certain point, the issue becomes moot.

In any case, childhood is both a universal and a particular experience. The myth of an innocent childhood has become very durable in affluent countries in the post-Second World War era. But for most of history and for parts of the world still, such innocence was never the case. Life forces the issue.

Of course, when we got back from Scotland, the warm weather returned. For several weeks we slept with the windows open. Then one evening as I was putting you to bed, I smelt smoke. For a moment I thought the neighbours were having a barbecue but it was too strong, too acrid. I closed all the windows and turned out the lights. Mum and I heard you coughing a little before you fell asleep. We were in the room next door looking at videos of the nearby Llangynidr mountain on fire. The smoke was billowing up the nearby valley, blotting out the hill of Mynydd Troed even though it had been a perfectly cloudless evening. We had been in the garden only a few hours earlier saying how it smelt like the Mediterranean: the dry smell of baked earth and dead grass. A more potent symbol of the changed reality of our world we could not imagine if we tried. The hot weather has led to an over 400 per cent increase in fires in Wales this summer. Global warming is accelerating.

Mum and I started looking at our neighbourhood the way a Greek or a Californian must look at the landscape: seeing not trees, hedges and fields of hay, but fuel. And calculating the distance between the stands of trees and the tarmac, the farmyard, the house. Where would we go if the fire came here? In the stream? It is practically dry. Under the bridge, in the dank, damp mud?

These are not questions we like thinking about. But as responsible parents, it is the kind of thing that we now must consider. Nowhere is safe

from the effects of climate breakdown. In cities across the world, vulnerable people without air conditioning are dying from the heat. At least a thousand in the UK, it is reported later this year.

For now though, the main event on the horizon is not the fire, but the imminence of secondary school for you, Daphne. You have been getting ready: selecting the right skirt (without pleats), the right earrings (no hoops) and the right (black) trainers that tread the line between what's fashionable and what's permissible. We talked with Mum about make-up that is not full of toxic chemicals, if you want to wear it.

Sometimes, I would like to press 'pause' and preserve you both where you are now at eleven and nine years old. It is a delightful age, before the onslaught that Mum and I are fearing of phones and fashion. We want the future to arrive as slowly as possible. You both, of course, are in a hurry – some things will never change!

CHAPTER 35

What are you writing about now, Dad?

September 2025

Dear Daughters,

The cat is out of the bag. You've noticed my absence in the mornings when I slink off to the shed at the bottom of the garden. I've been editing my letters to you for publication after a drawn-out conversation with Mum as to whether it was a good idea or not. There are still things about the future that are difficult to hear and so we still intend that you might read them when you're older. But, as ever, the best-laid plans ...

'What are you writing about now, Dad?' you asked the other day.

'A book about talking to children about climate change,' I replied, a little evasively.

'Which children?' You're quick.

'Mine.'

'You mean, us?'

'Yes,' I conceded.

'Are we in it?'

'Yes.'

'Oh! Can we read it?'

'No, not yet. It's for you to read when you're eighteen.'

'Nine years!' sighed Cissy. 'We've got money. We can just buy it.'

'What's the story?' Daphne asked.

'It's about talking to you about climate change and why that is hard,' I try and explain.

'Sounds boring,' said Cissy.

'It's not hard, you just talk,' Daphne said. 'You do it all the time.'

'Yes, I know, but lots of people don't.'

‘Why not? That’s weird,’ said Daphne. ‘It’s part of life, you can’t avoid it.’

‘No offence,’ said Cissy. ‘But I’d rather read *The Hunger Games*.’

There is, at the time of writing, a cat’s cradle of wool covering an arena of Lego where unfortunate characters from your Sylvanian Families have met sticky ends in multiple rounds of the ‘Sylvunger Games’. You got the point of the books swiftly: the world, its laws, its twisted logic and the obvious righteousness of the rebellion, the districts united against a common enemy. I sense we are underestimating your capacity for imagining grim alternatives. It is our imagination that has ossified.

Part of the reason for the series’ success, I think, is how recognisable the world depicted in it is. The Capitol looks like modern elites. ‘Our enemy does not share our values,’ President Snow tells the residents; ‘they want to destroy our way of life’, aping phrases that have become routine for UK and US leaders in the era since 9/11 and the so-called war on terror. The hunger games are the epitome of a hyper-individualised society founded on the notion of divide and rule. ‘You’re either with us or against us,’ George W. Bush famously said.

But what is also so recognisable is how unnatural the system feels. Its wrongness, its injustice, looks and feels wrong – and is therefore logically, narratively, unsustainable. The story *has* to end differently and that’s why we keep reading: humans are better than this, we know. This is how the current moment feels to me, and, I think, to many people. What is less clear is the way forward. Where is the rebellion for our time?

We live in mythic times. When the air, the earth, the sea are shifting and when all the creatures that live within our atmosphere are in jeopardy. These are the times when myths like the lowland hundred, when the grand questions, the ultimate questions of existence, come to the fore. Will we submit to divide and rule or will we embrace our collaborative nature?

How we answer them defines our response to the challenge of the destruction of our own habitat and to the challenge of what comes next. And of course, people will answer that question differently depending on their experience. If you understand yourself as part of nature, might you see other humans as part of the same? If you know that the forest is connected underground and that the healthiest and most adaptable plants are the ones with the richest relationships with other species – like the fungi – might that

influence how you think about other humans? What are the models, the myths, the metaphors that we choose to live by now?

The grand narrative of human history is, of course, always written by the winners. So far, that story has endorsed a competitive idea of evolution, a misreading of Darwin and of many that followed in his footsteps. In a sense, capitalism has encouraged us to look at nature through a lens of its own making: the survival of the fittest. But in real life, a vital phrase these days, the forest is not only an arena of competition, it is a place of community and society: all evolution is co-evolution. As you know very well, the loss of one species changes the dynamic of the whole system. Consider the lichen, the phytoplankton, the jellyfish or indeed the human gut. The very root of life is cooperation; from the moment a single-celled organism incorporated a chloroplast into its body or a fungi offered a home to an algae that became the first lichen. We know we rely on the forest of other species but we know so little about what the effect of altering those relationships might be. Therefore, it stands to reason, all life must be held sacred.

This is the essential ethic that has come naturally to you both, with, it seems to me, almost no input from your parents. You have instinctively learned to think like a forest. The challenge for you is in holding on to that worldview even as the world around you tries to rationalise it away. And the challenge for us is to nurture that flame of clarity and outrage and not to help in the rationalising.

And so, in answer to your question: I started off writing about climate change but what I am writing about now is the rising threat of fascism. This is, in my view, a response to our failure to grapple with the wider causes of the climate and nature crisis. As our unsustainable experiment in plundering and polluting the earth reaches crisis point, large swathes of society are becoming persuaded by organised online campaigns and dark money to metabolise their grief at what has been lost and their fear at what more they might lose into hatred towards others and into myths of racial purity. This month, over 100,000 people marched in London under an umbrella of exclusionary rhetoric and hate speech while enjoying police protection. At the same time, protestors against genocide are going to jail. This seems very wrong. Yet in both cases, people who consider themselves ordinary citizens are hitting the streets, angry at what they see as injustice.

When I began writing to you, I worried that you might not enjoy the same comforts that I have learned to take for granted over the course of my life so far. But these days that seems quaint. Now, I am more concerned that you won't enjoy the same safety and human rights that have come to underpin the liberal world order since 1945. These threats are linked. And they stem from the same failure to restrain and reform our extractive and unequal economy.

Grandpa's generation failed to understand the risks trumpeted by the 'Limits to Growth' alarm in 1972 and the 1992 Rio conference. My generation knew what was happening and at almost every opportunity since, failed to act. So now we have arrived at a point where even the possibility of political action at scale is under threat as fossil capital and Big Tech billionaires are joining forces to sponsor the voices of division, close down democratic debate and political space. Across nations, the idea that the state only serves certain kinds of citizens and that violence against the 'others' is legitimate, is rapidly gaining ground. When we start unpicking the hard-won notion of universal human rights, then no one is safe.

In a sense, my own experience has come full circle. In the heady days of the end of the Cold War, the idea that we had reached the 'end of history' and that all nations and peoples were destined for growth and prosperity in line with the Global North was common. But these days, the state failure and political violence that I investigated for Human Rights Watch over the last twenty years in Africa feels more like the future. The racialisation of violence against Arabs in Zanzibar in 2001, the ethno-fascism of the 2008 election violence in Kenya, the intercommunal violence in Ethiopia that led to civil war, the dehumanisation of Somali refugees (and citizens) in Kenya. At the time, it was easy for me to be an ally to people struggling to defend human rights in those places: I was white and I had a UK passport. But if similar struggles and campaigns of hate and division unfold closer to home, those privileges will be meaningless.

When the going gets tough, as it has done in many parts of the world now and in the past, the question is no longer one of comfort, but of character. Will we risk our own freedoms for the sake of others? Will we think like a forest and unite the districts against the forces of division? Or will we compromise to save our own skins?

This is the eternal human dilemma, the basis of so much religion: when we are tested, will we do the right thing? I hope I will. I hope you will too.

But, as you know well from *The Hunger Games*, we usually don't find out how we will respond until the moment comes. You are writing the story from here on out. Tell me how it ends.



Afterword

Ben Rawlence and Caroline Hickman

Ben: As you will know if you've got this far, this is not a book about how to parent. It is, simply, one parent's experience. Every parent's journey is different just as every child is different, but, I hope, sharing experiences can be a source of learning, solidarity and hope.

Caroline: As Ben says: this is not a book about how to parent but is his experience of parenting during a particular time in history. Similarly, this is not a book about therapy. It is a book about relationships and how they are being affected living through the climate and ecological emergency, and how climate psychology could help with that. He says in the book that he was slightly nervous when I went to visit him and the girls; what he may not have realised was that I was nervous too. The emergent nature of the climate crisis means we are all learning about these things, finding ways to navigate it. Together.

Ben and Caroline: Here are a few things we've learned along the way:

1. **Tell the truth.** In age-appropriate ways and in simple terms, try to be clear about the basic facts of climate change and biodiversity loss. If you are unsure, have a look at trusted sources such as the BBC, NASA, and some of the resources listed at the end of this book. This is an important part of building trust with young people and allowing them a safe space where they can ask questions and talk about their feelings.
2. **Listen to children.** The brain develops in relationship and in dialogue with its surroundings, and these are constantly changing. Children's worlds and therefore brains are different. They see different things and see differently. They have unique insights and perspectives to share and

from which adults may learn a lot! We need to see things through their eyes as well as our own.

3. **If you don't know, say so.** The changes unfolding are complex and there are varying levels of uncertainty about the future. This is one of the key challenges – being able to sit with uncertainties and be honest with children who look up to us when we don't have all the answers.
4. **Explore together.** Solidarity is more important than 'solving' the challenges facing us and our children. Many of the challenges cannot be 'solved' in any conventional sense: we have to learn to live with the disruptions climate change is bringing. Exploring this together builds a shared understanding and a shared response.
5. **Avoid blame and shame.** Where we are is not your fault, or our children's fault. Our predicament is part of a wider story about human societies over centuries; the crisis in nature has a past, a present and a future. So, avoid blame, but accept culpability: it helps.
6. **Eco-anxiety is not always anxiety in the clinical sense.** It is a healthy emotional response to a real situation. Appropriate alarm is a useful emotion that can teach us much about what is going on and can be a spur to further learning and action.
7. **Develop healthy defences** such as humour, playfulness and courage; altruism, empathy and kindness. Do not just focus on what has been or may be lost. New strengths can be nurtured and can grow; crises always hold the seeds of new life.
8. **Take action that feels right for you.** 'Turning your anxiety into action' may be useful for some people, but as a catch-all response to feeling worried about the state of the world it is poor guidance. In many cases, young people are feeling worried about the lack of political and social action by adults and taking action themselves may not make them feel 'better'. Be specific about what 'action' means and what feels right for you.
9. **Build culture.** If we understand our current situation as the result of a crisis of values and a culture of pollution, waste, individualism and unrestrained economic growth, then many things can count as a response, not just political change at the formal level. Seen in this way, parenting, cooking, telling stories, making community and doing things that help to shift norms and ideas all count as meaningful action.

10. **Start now.** As supply chains falter, inflation makes the cost of living more expensive, and climate shocks increasingly disrupt water and food supplies it is important to start building relationships and having conversations at the family, neighbourhood and community level now, to build a shared understanding of what's happening and networks for resilience and care.
11. **Go outside.** Spending time outside is good for so many things: physical and mental health, well-being, togetherness. It's an old saw but a good one: you won't protect what you do not love. Wherever there is a patch of soil there are billions of living things waiting to reveal their wonders.
12. **Vote for sensible people.** Politics still matters! Vote for sensible people who get it, who speak as though they understand the scale of the challenge outlined in these pages, and who propose ideas that might stand a chance of mitigating some of the worst effects of what we have already unleashed.
13. **Think (and act!) like a forest.** We're in this together. Not just you and your kids, but you and your neighbours, you and your kids' schoolteachers, you and me; we are all living through this unique moment in human history and surviving and thriving will depend on building community and working together.
14. **It's never too late.** The earth does not operate according to deadlines or human targets. This is an unfolding process. There is always work to be done to limit harmful practices and to ensure fairness and humanity in human affairs. Life is always a moral endeavour.

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