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Introduction

'... leave Hell. And again behold the stars.'

Dante Alighieri

As I signed off on the proofs of *Hope in Hell* back in March, more than a third of the global population was in 'lockdown' on account of the COVID-19 pandemic. In just a few short weeks, the world had moved from 'business as usual' to introducing increasingly dramatic measures in response to the worst public health emergency in more than a century. It was clear even then that things were going to get a great deal worse before getting better. The cost of COVID-19 is literally incalculable – for individuals, families, communities, businesses and whole economies. Nation states will be paying down the staggering debts incurred to deal with it for decades to come.

For completely understandable reasons, with so many people's lives so painfully disrupted, pretty much all consideration of the Climate Emergency has disappeared from the news. What we're witnessing is a particularly telling example of 'the tragedy of the horizon', with COVID-19 posing an immediate and un-ignorable threat, with the lives of so many at risk, necessitating comprehensive, draconian interventions from government, to be extended for as long as it takes. By contrast, the Climate Emergency is still seen by most people today as a challenge for tomorrow. Even though our continuing failure to get to grips with it today, *right now*, is putting at risk the lives of countless millions of people in the future.

The Climate Emergency poses an infinitely graver risk to humankind than COVID-19, but has warranted very little political

engagement over the years. That's the tragedy of the horizon: today *always* trumps tomorrow.

Unless, that is, the sheer, gut-wrenching trauma of COVID-19 causes us all to start thinking very differently about the future. At the very least, people have already begun to understand that COVID-19 is almost certainly just the first in a new wave of pandemics – caused in large part by our seemingly insatiable desire to go on abusing the natural world and its wild creatures, with no thought for the consequences to ourselves.

Experts have been warning for many years that most of the new diseases that have emerged since 1960 come from wild animals; the risk of pathogens jumping from animals to humans has always been there, but our constant encroachment on the world's rainforests and other habitats has multiplied those risks many times over. As have the global trade in wild animals and wild animal markets.

Governments could put a halt to all those things, specifically to reduce the risk of future pandemics, with exactly the same kind of urgency and resolve they've demonstrated in addressing this particular pandemic.

Might that be just the first of many dramatic shifts in policy that, pre-COVID-19, were seen to be 'unthinkable'? Throughout *Hope in Hell*, I've set out to explain why this is *the* decisive decade: if we do what we need to do by the end of the decade to avoid runaway climate change, however 'unthinkable' that may be to most politicians at the moment, then we'll have a fighting chance of ensuring a better world for humankind in the future. But if we fail to grip that challenge, then it's more than likely that today's young people will be looking back on COVID-19 as a relatively insignificant, short-lived perturbation.

COVID-19 is a hellish shock. Paradoxically, it's also the reason why we should be more hopeful than ever before about the climate challenge. Cauterised as we are by the intensity of damage done to the global economy, with its chilling reminder of just how vulnerable we all are in this hyper-connected world of ours, I

believe COVID-19 makes it significantly *more likely* that we will indeed do what needs to be done regarding the Climate Emergency – just so long as the post-COVID recovery process puts that emergency at its heart.

Just so long as people (and their governments) realise that warnings from experts (on pandemics or climate change) *must* now inform *all* future policy, and that those who dismiss that expertise as 'fake news' are dangerous enemies of their own people. Just so long as we come to recognise ourselves once again as creatures of the Earth, governed by the laws of physics and the biological interdependencies of *all* living creatures. Just so long as we use this unprecedented shock to our way of life to rethink our basic values and, indeed, our ultimate purpose as human beings.

As and when the virus recedes, we'll be emerging into a very different world from a climate perspective. Emissions of greenhouse gases in 2020 will be dramatically reduced, providing a critical 'breathing space' in the inexorable upward trend over the past few years. But we know from past experience (for instance, after the financial crash of 2008), that falling emissions driven by economic distress are not sustainable. And they're easily reversed. As António Guterres, Secretary-General of the UN, put it: 'We will not fight climate change with a virus.'

Above all, we must therefore beware of any kind of 'rebound recovery'. For some, the desire to return to a pre-COVID-19 state will be all-consuming. We must be ready with an equally compelling narrative – a just, compassionate, zero-carbon narrative – as highlighted throughout the following chapters, as the best possible way of restoring jobs and injecting purchasing power back into our shattered economies.

After everything we've learned through the COVID-19 crisis about the power of community, solidarity and empathy, there's no reason to suppose that people will unthinkingly re-embrace the false promises of individualistic, me-first consumerism. Or beg to have their lives blighted all over again by filthy streets and foul air, or diminished by the insanity of a daily commute – when

working from home often makes so much more sense for employees and employers alike.

And we can take some comfort from glimpses of that better future already in our midst today: the citizens of Wuhan (the Chinese city at the epicentre of COVID-19) eventually allowed out onto the streets of their city – and delighting not only in that freedom but in the unprecedented joy of being able to breathe clean air; reports of wildlife returning to all sorts of less polluted, less frenetic city environments; people out and about in gardens, parks and woodlands, finding not just comfort but increased wellbeing and even healing in reconnecting with the natural world.

It may seem insensitive to be talking about the politics of recovery when we're in the midst of a life and death struggle to minimise the personal and economic consequences of COVID-19. But the Climate Emergency is upon us, in good times or bad. So for all those dedicated climate campaigners, watching another precious year slip by without serious progress in addressing the Climate Emergency, especially after the postponement of the big climate change conference at the end of the year, and for the tens of millions of citizens around the world increasingly concerned about the threat of accelerating climate change, there's a simple message: do everything we possibly can to keep family, friends, colleagues and communities safe and supported, in the midst of the crisis, whilst recognising that it *will* end, and that we will then have an unprecedented and *unrepeatable* opportunity to invest in the kind of social and economic recovery that will make it possible to avoid the horror story of runaway climate change.

The 2020s will indeed be the decisive decade in addressing today's Climate Emergency. We now know that 2021 will be the decisive year.

Jonathon Porritt, 5 April 2020

Part 1

Reasons to Be Cheerful

1

This Is Personal

'Hope is an embrace of the unknown and the unknowable, an alternative to the certainty of both optimists and pessimists.'

Rebecca Solnit

I wrote the first chapter of *Hope in Hell* in July 2019, on holiday in Cornwall, in the same place we go every year, with a wonderful view of one of Cornwall's oldest and most successful wind farms. The Arctic was on fire. A smoke cloud the size of the whole of the EU was drifting over Siberia. Nearly 5 million hectares of forest were burned. It turned out that July was the warmest month on Earth since we humans first made our mark more than 200,000 years ago. And the warmest month before that was June 2019.

I wrote the last chapter of *Hope in Hell* in January 2020, with bushfires in Australia (which started in November 2019) still raging, destroying 100,000km2 of forest, causing the death of thirty-three people and more than a billion wild animals, and economic damage that will run into many billions of dollars.

Those disasters don't come as any kind of surprise (I joined the Green Party back in 1974, and first started campaigning on climate issues with Friends of the Earth in the 1980s), but they now overshadow every other aspect of the work I do today to help build a more sustainable world.

I have absolutely no reason to doubt the warnings of scientists that we have no more than a decade to avoid the horror story of what is referred to as 'runaway climate change' – when natural systems start shifting so fast that there's nothing we can do to stop things getting worse and worse. I see in those warnings a moral imperative that now affects each and every one of us: whatever we can do to avoid that horror story, each in our own way, then we *must* do it.

I was hugely influenced early on in my life by a book called *Blueprint for Survival*, published by *The Ecologist* magazine. In a few short chapters, it explained why a model of progress based on more and more people demanding more and more, every year, on a finite and fragile planet, could only end in tears. As it happens, I didn't actually think that the survival of the human species was seriously at risk when I read it; I just thought that we were managing our affairs, even then, in grotesquely inequitable ways, and that we were trashing the environment in a way that could barely be believed. In short, I understood then that the price we were all being asked to pay (individually and collectively) for 'progress' was bordering on the insane. Fifty years on, I still feel the same. But now I know that the survival of the human species is indeed at risk. That's what the scientists mean when they talk about runaway climate change as 'an existential threat to humankind' – a threat to our long-term survival as a species.

Runaway climate change is undoubtedly a hellish prospect. Despair often beckons. But I'm also – strangely, and rather wonderfully – brimful of hope in a way that I haven't been for a long time. Not only do I believe that *all* the solutions we need to address the Climate Emergency are *already* to hand, but I now see all around me the stirrings of an unprecedented economic and political transformation that will help us avoid that nightmare. What's more, that transformation could, in the not too distant future, lead to the creation of a world that I believe the vast majority of us probably yearn for – a world in which each of us gets a chance to be brought up lovingly, to be properly educated,

to work hard and fulfil our true potential; in which today's astonishing wealth is shared so much more fairly; in which we feel secure in our communities, with decent homes and healthcare, with an expectation of being cared for as we get older; in which our local environment is kept clean, green and healthy, and the global environment is made secure for our children and all future generations.

That's why I'm now so improbably hopeful. Our world – our moral universe – has suddenly become binary. There is no moral universe – in any country, under any faith system, whatever our personal situation or political beliefs – in which 'business as usual' can possibly provide any rationale for us continuing to live our lives in the way that we do today. COVID-19 provides ample confirmation of that reality. Either we start doing *everything* we can to help make the future as good as it still can be, not just for our children and grandchildren, but for the whole of humankind. Or we don't.

I spent the first twenty years of my life (in the Green Party and Friends of the Earth) campaigning tirelessly to force environmental issues onto the agenda, to persuade politicians and business leaders to rethink their environment-trashing policies and practices. Some campaigns we won; most we lost. Some ideas of ours were surreptitiously taken up by mainstream politicians; most were ignored. For the better part of two decades, it was a war of attrition, and there came a point for me personally (inspired by two weeks at the Earth Summit in Rio de Janeiro in 1992) where the emotional repertoire I was playing with during those years – anger, fear, blame and guilt – was completely exhausted.

So I came back from Rio determined to find a way of working with people's positive energy, to harness the new awareness emerging at that time – particularly within progressive companies. In the next couple of years, together with my Green Party colleagues Sara Parkin and Paul Ekins, I cofounded Forum for the Future (happily, still thriving, and now established in New York, Singapore and Mumbai as well as in London) and helped set up the

Prince of Wales's Business and Sustainability Programme (happily, still thriving as part of the hugely influential Cambridge Institute for Sustainability Leadership). Some of my fellow Greenies gave me a very hard time back then for our readiness to work with the private sector, but I felt it was the right thing to do at the time, and I stand by that judgement now. It's still hard to imagine how we're going to transition to a peaceful, just and genuinely sustainable world without progressive companies playing a big part in that process.

Beyond that, as chair of the UK Sustainable Development Commission (SDC), set up by Tony Blair in 2000, I spent nine years of my life working with a dozen Whitehall departments, to ensure 'that sustainable development should become the central organising principle of Government'. Despite all the bureaucratic barriers, we made good progress during that time – very good progress with some departments – only to see both the Commission and all that work unceremoniously swept aside in 2010 by the Conservatives and the Lib Dems. That was a bitter blow – compounded by the fact that Labour, in opposition, did next to nothing to keep alive the idea of sustainable economic development, leaving only the Green Party to go on telling people the real truth of what was happening to the world, to our climate, and to any semblance of a fairer, more compassionate world in the future.

For the five years between 2010 and 2015, we sweated it out in Forum for the Future, endlessly pushing and cajoling our business partners into faster, deeper changes. To be fair, they were almost always up for it, but operating as they do in an inadequately regulated, cost-externalising and fiercely competitive neoliberal global economy, there's always going to be a point beyond which even the most progressive company simply will not venture. We feel that all the time in Forum for the Future, as do many of our colleagues in the companies themselves.

And then came the much-hyped Paris Agreement, signed up to by (almost) all nations back in 2015. I wasn't in Paris for that

breakthrough moment in climate diplomacy, but I remember all too well the twenty-four hours between the near-euphoric mixture of joy and relief as the media reported on world leaders' commitment to doing 'everything in their power' to avoid runaway climate change, followed by the dawning realisation just a few hours later that what had actually been signed up to (in terms of all their countryspecific commitments) would actually take us careering past a civilisation-threatening average temperature increase before the end of the century. The kind of hope that sustained me at that time (and had done so, more or less, over the previous forty years) shrivelled in my soul at that moment. Since then, I've known deep down that things would almost inevitably come to this time of reckoning.

All of which means, in a way that is both incredibly simple and incredibly complex, that I have to move on. I have to use whatever influence I may still have to persuade people that *there is no hope whatsoever in another ten years of incremental change*. If we're to do what we need to do to avoid runaway climate change, we have to force our politicians to step up and do what is now needed. I've come to the conclusion that we have no choice: without mass civil disobedience, at this very late stage, I cannot see any other way of avoiding that threat of runaway climate change. And I cannot, in good faith, advocate for that kind of game-changing civil disobedience without being prepared to be part of it myself, in one way or another.

Our two daughters are thirty-one and twenty-eight. For both my wife and myself, the privilege of being a parent has been and still is beyond words. It has helped make us who we are today, just as I hope our lives have helped make our daughters who they are. And, today, they're good – each in her own way (I write this with their permission!) with a pretty conventional mix of hopes and fears about jobs, personal relationships, the future and so on. But what of that future? I was roughly their age back in 1980, six years into a career as a teacher in a London comprehensive, and nearly ten years into my somewhat improbable life as a Green activist. All

being well for them personally, they'll be my age around 2060. On a 'business-as-usual' basis, the world in 2060 – my daughters' world in 2060, your children's world in 2060, your grandchildren's world in 2060 – will already be the closest approximation to hell on Earth that you can possibly imagine, because of runaway climate change. (I spell out those reasons in Part 2.)

That realisation gives rise to every emotional response you can possibly imagine: regret, grief, guilt, anger, rage – and the rest. But threaded through all of that is what I can only describe, in a rather banal way, as 'just-in-time hope'. Hope born of today's incontrovertible climate science. Hope born of an enduring belief that, on balance, most of us want to live our lives guided by the so-called 'Golden Rule' – 'treat other people as you yourself would hope to be treated by other people'. Hope inspired by all those millions of people, young and old, now actively demanding radical change before it's too late.

For me personally, at this late stage, that means not just pushing 'the solutions agenda' harder and harder, but actively supporting the use of civil disobedience, encouraging more and more people to be prepared to break the laws of their land, peacefully and non-violently, to oblige politicians and decision-makers to change those laws before it's too late. I see the school strikes movement (which goes under many different names around the world) as an inspirational manifestation of civil disobedience on the part of young people, purposefully absenting themselves from their schools in order to remind politicians of their duty. For me, that means doing everything I possibly can to support young people in their own efforts to build the kind of civilised, compassionate, just and sustainable world that we ourselves have so signally and so immorally failed to deliver.

So much has been written about climate change over the past couple of years, but I hope that the basic narrative of *Hope in Hell* makes it a little bit different:

It is *not* too late to avoid runaway climate change. But it soon will be.

Which means we must continue to spell out the uncomfortable implications of today's climate science, while seeking solutions in three areas:

- Radical decarbonisation of the economy through technology, stopping CO2 and other greenhouse gases getting into the atmosphere;
- Radical recarbonisation of the natural world through ecology, taking CO2 back out of the atmosphere;
- Radical political disruption through civil disobedience.

That is the only appropriate response to today's Climate Emergency.

And that is the only place where authentic hope is to be found.

I shall return to the implications of this analysis, for each and every one of us, in the final chapter.

2

The Power of Hope

'It always seems impossible until it's done.'

Nelson Mandela

Despite having lived my entire adult life witnessing a progressively worsening ecological crisis, I've always been more drawn to narratives of hope than to the drumbeat of despair. In 1979, I wrote the general election manifesto for the Green Party (then the Ecology Party) as an upbeat declaration of faith in the power of Green politics. When I was director of Friends of the Earth, we made a point of celebrating all the breakthroughs and success stories going on during the 1980s. For the Earth Summit in Rio de Janeiro in 1992, I initiated the Tree of Life project, securing more than a million environmental pledges from people all around the world. Sara Parkin, Paul Ekins and I then set up Forum for the Future in 1996, specifically to inspire both the private and the public sectors with the power of solutions. And I wrote *The World We Made* in 2012 to conjure up a positive vision of what a fair, compassionate and genuinely sustainable world could look like in 2050.

I couldn't possibly have stuck at it over all those years without being able to drink deeply and regularly from a constantly replenished reservoir of hope. I'm drawn to people whose lives are driven by that same impulse, often facing extraordinary challenges in their work. Time after time, I've seen how hope provides some

immunity against adversity. All progressive social movements are nurtured by a similar kind of hope, frequently in the face of ridiculous odds. Nelson Mandela's reflection that 'It always seems impossible until it's done' provides reassurance to countless causes, organisations and communities endeavouring to protect what is valuable to them or seeking to make life better for others.

All that said, I would never describe myself as an optimist! There are just too many powerful, destructive forces at work in the world, and too many bystanders reluctant to do anything about those destructive forces, for there to be any justification for optimism. But nor would I describe myself as a pessimist. There are just so many powerful, positive forces at work in the world, with more and more people prepared to stand up for them, for pessimism to make any more sense than optimism. As the acclaimed US author Rebecca Solnit says:

> Hope is an embrace of the unknown and the unknowable, an alternative to the certainty of both optimists and pessimists. Optimists think it will all be fine without our involvement; pessimists take the opposite position; both excuse themselves from acting. It's the belief that what we do matters, even though how and when it may matter, who and what it may impact, are not things we can know beforehand.

There's a particular variety of what I call 'shiny optimism' that I find especially irksome – and Ola Rosling (son of the redoubtable Swedish academic Hans Rosling) is one of the shiniest. There's a huge amount of really valuable material in his bestselling book *Factfulness*, but his somewhat selective use of statistics can leave readers with an inaccurate picture of the world as it really is. He correctly points out, for instance, that the share of the Earth's land surface protected as national parks or reserves increased from next to nothing in 1940 to 14.7 per cent in 2016 – but without providing the necessary counter-balance that a huge number of these protected areas are being systematically encroached on by illegal settlers and developers (especially in countries where the

population is still increasing), let alone that the rest of the natural world is pretty much collapsing all around us, with more species becoming extinct every year.

In the same way, he celebrates the increase in cereal yields from 1,400kg per hectare in 1961 to 4,000kg in 2014 – without mentioning that this massive 'improvement' in productivity has only been secured by drenching hundreds of millions of hectares in toxic chemicals, completely disrupting the nitrogen cycle through the excessive use of artificial fertilisers, entailing horrendous damage to soil quality and biodiversity, and causing the emission of billions of tonnes of greenhouse gases – year after year after year.

Ola Rosling would no doubt dismiss me as someone in thrall to what he calls 'the negativity instinct', noticing the bad more than the good, misremembering the past, and so on. But 'selective reporting by journalists' and the focus on selective statistics (without appropriate context) is an important part of the reason that vast numbers of people are still going about their daily lives thinking all is well with the world, mindlessly celebrating the wonders of modern technology without understanding any of the downsides. It's difficult in any book to present readers with all the relevant facts, but those who are committed to 'developing a fact-based world view' should be careful not to advance arguments that reinforce a very partial world view.

One of the principal justifications for adopting a more optimistic position than reality might warrant is that this is held to be a more effective way of persuading people to get involved in environmental causes or in campaigns to reduce emissions of greenhouse gases. There's a strong body of work that demonstrates that people who feel optimistic about the future are more likely to take action to help improve it. For instance, telling people that the use of coal, the dirtiest of fossil fuels, is slowly declining provides a much more positive measure than telling them that nearly 40 per cent of the world's electricity is still generated in coal-fired power stations. On the other hand, another

body of work shows that people are more likely to be motivated to act by hearing it as it really is, even if that makes them more apprehensive or fearful. It's clearly a fine balancing act that's required.

Putting the optimism/pessimism spectrum to one side, there are many different shades of hopefulness within the climate debate. Many feel very strongly that without hope it's impossible to overcome the sense that many people have that they themselves can't make a difference anyway, so why bother; impossible to inspire people to become active themselves, rather than sympathising from afar with those taking action on their behalf; impossible to confront what is undoubtedly a very disturbing picture, when it's so much easier not to have to think about it at all; impossible to sustain our own personal energy and emotional resources.

I concur with that view – just try advocating for change in a hope-less way rather than a hope-full way! However, I also have some sympathy with those who argue that you can't just use hope instrumentally in that way if there's no rational pretext for remaining hopeful when looking honestly at what the science is telling us. As we'll see in Chapter 9, the voices of those who believe it's already too late to turn things around are increasing all the time – with all sorts of implications for building a powerful movement for change.

One thing I do know: the idea that it might already be too late to prevent a total climate catastrophe impacts people very differently depending on how old they are. And the fact that there are now more and more young people and children having to deal with that sort of possibility represents an almost unimaginably cruel burden to have imposed on them.

GRETA THUNBERG: 'ACT LIKE YOUR HOUSE IS ON FIRE. BECAUSE IT IS.'

That's what lends the extraordinary story of Greta Thunberg an added piquancy. As she's explained it, she started learning about climate change at the age of eight; as she thought through the consequences of today's business-as-usual model of economic development, it was incomprehensible to her that governments were doing next to nothing to avoid what would otherwise become an inevitable climate catastrophe. At eleven, this made her very depressed. She stopped speaking and ate very little. At that time, she was diagnosed with Asperger's syndrome. ('For those of us who are on the spectrum, almost everything is black and white. We aren't very good at lying, and we usually don't enjoy participating in this social game that the rest of you seem so fond of.') With the help of her parents, she somehow worked her way out of that depression, in part by changing their lifestyle to better fit the science that was still preoccupying her. And then, in August 2018, she took it upon herself, without her parents' permission, to go on strike 'for the climate' outside the Swedish Parliament in Stockholm. 'Why should we be studying for a future that soon may be no more, when no one is doing anything whatsoever to protect that future?' The logic is disturbingly compelling.

Fast-forward a few months to March 2019, when more than 1.4 million schoolchildren were out on the streets in over 2,000 cities around the world – an utterly unprecedented explosion of interest for any socially progressive cause. Greta Thunberg is herself the first to say that's not all down to her, but it almost certainly wouldn't have happened like that without her intervention. This isn't really a numbers phenomenon: it's about a different quality of leadership. She has added a completely new dimension to the notion of 'speaking truth to power', acting entirely authentically in service to something beyond herself.

As such, she's a remarkable role model for young people today – and for people of any age, for that matter. I was twenty-four when I joined the Green Party in 1974, naive, isolated and totally dependent on a handful of game-changing books – including Rachel Carson's *Silent Spring*, Fritz Schumacher's *Small Is Beautiful*

and *The Ecologist* magazine's *Blueprint for Survival*. For a long time, I had no go-to role models, and only a very small community of kindred spirits. It wasn't until Petra Kelly exploded into my life in 1979, as a co-founder of the Green Party in Germany, a passionate eco-feminist and peace activist (Martin Luther King was one of her most important role models), that Green politics took possession of my spirit as well as of my brain. Forty years on, I can't help but see in Greta Thunberg the same kind of searing honesty and integrity.

It couldn't be more different today for anyone in their teens or early twenties – which is clearly one of the reasons Greta Thunberg attracts such utterly hateful trolling, mostly from sad and embittered middle-aged men, fearful of everything she stands for and of the so-called 'Thunberg effect'. She's not alone in that, of course: every stand-out leader who happens to be a woman, of any age, is today subject to a similar assault and battery on social media.

There's something else at work here. There's no doubt in my mind that the Thunberg effect represents a genuinely disruptive, discontinuous transformation, way beyond the slow incremental pace of change that has bogged down the climate debate for decades. As the author Joanna Macy puts it: 'Sudden shifts can happen in ways that surprise us; structures that appear as fixed and solid as the Berlin Wall can collapse or be dismantled in a very short time. Understanding discontinuous change opens up a genuine sense of possibility.'

And one of the reasons for that is, I believe, particularly significant. It has long been a bugbear of mine that so many environmentalists remain blind to the grotesque inequality that scars our world, and that so many campaigners for social justice remain blind to the collapse of our natural world. Social justice and climate justice are two sides of the same coin: always have been, and always will be.

Greta Thunberg has come in for some criticism from environmentalists for what they describe as 'a lack of political clarity'. For me, that's a bit rich coming from those who've spent

> I'm a human being. I'm the father of two young children. I'm a husband, a son, a brother, a citizen. And I'm engaged in a struggle for the fate of humanity and of life on Earth. Not a polite debate around the dinner table, or in a classroom, or an editorial meeting – or an Earth Day picnic. I'm talking about *struggle*. A struggle for justice on a global scale. For human dignity and human rights for my fellow human beings, beginning with the poorest and most vulnerable, both far and near. For my own children's future – but not only my children, for all of our children, everywhere. A life-and-death struggle for the survival of all that I love. Because that is what the fight for climate justice is.

Utopian thinking?

Talking of picnics, the original Earth Day on 22 April 1970 mobilised an astonishing 20 million Americans (roughly 10 per cent of the US population at that time) to take part in demonstrations across America – the largest ever civic event on planet Earth. It undoubtedly helped change things, ushering in an era of unprecedented law-making in the USA – including the Clean Air Act, the Endangered Species Act and the Clean Water Act. This year marks the fiftieth anniversary of Earth Day and, if the organisers succeed in achieving their goal, on 22 April 2020 more than a billion people will have been involved in campaigns for our natural world, with a particular focus on addressing climate change.

Moments like that can make a real difference. People's hope comes in many different shapes and sizes: some quite abstract and back-of-mind, providing at least some reassurance in such a troubled world; others much more hard-edged, something we *do* rather than *have*. There's nothing quiescent about this kind of hope, and it entails real choices about how we live our lives today – in the certain knowledge that the lives of those who follow us will

be significantly shaped by the choices that we make. As Alexandria Ocasio-Cortez says: 'Hope is not something that you have. Hope is something that you create with your actions. Hope is something you have to manifest into the world, and once one person has hope, it can be contagious.'

It was in that spirit that I wrote *The World We Made*, in 2012, as a hopeful message looking back from the vantage point of 2050. Precisely because of the choices people started making (from roughly 2020 onwards), it was possible for me to present the world in 2050 as a much better world than today. Although still seriously impacted by climate change, humankind has avoided the horror story of runaway climate change; we've freed ourselves of the false promises of consumerism and growth for growth's sake; we're well into a decadal programme for restoring the natural world; we lead simpler, fairer, more compassionate and responsible lives. And we're much more politically engaged since the emergence in 2019 of a broad-based protest movement, driven primarily by young people, called 'Enough!' (That's one of the predictions that I *did* manage to call correctly!)

It's crucial that we give ourselves time to imagine what that 'better world' might look like, and to picture ourselves living in that world, so that we can become better storytellers as we confront the Climate Emergency. People need that kind of reassurance, that such a world *is* still available just so long as we can break out of today's lethal inertia. That's not utopian; it's a simple recognition of the power of human creativity and imagination. This is how Rob Hopkins, the founder of The Transition Network, captures it:

> I meet more people every day who have given up, who are sure it's too late, who have no doubt that the future's going to be awful, worse than now, a slow – or rapid – slide into collapse. These stories can become the wall that separates us from other possible future scenarios, and from the capacity to envision and enact a positive future, one in which we've

actually tackled our problems with competence and courage. As the French say: 'You can't catch a fly with vinegar.'

As to the *means* by which we get there, that's a very different story. We know only too well what hasn't worked over the past thirty years, and we know that Albert Einstein is credited with defining insanity as 'doing the same thing over and over again, but expecting different results'. For me, our only hope today lies in recognising the true implications of that all too familiar saying, and committing uncompromisingly to addressing the Climate Emergency very differently through the exercise of our collective political will. Including, as I've already mentioned, the inevitability of many different kinds of civil disobedience.

But what grounds are there for supposing we're going to see such a profound transformation in the politics of climate change? Is this just more 'magical thinking', another example of false hope triumphing over immovable reality? As of now, the word 'mass' is the problem; we're certainly witnessing plenty of civil disobedience, but the numbers of those involved on a global basis are still very small. Like many of my colleagues today, I take some comfort from the work of US political scientist Erica Chenoweth, whose investigation of hundreds of campaigns over the past hundred years or so led to the conclusion that it takes only 3.5 per cent of the population of any country actively participating in protests to achieve significant political change. I shall draw on her work in further exploring the likelihood of mass civil disobedience, sustained over an extended period of time, in the UK, the USA and beyond, in subsequent chapters – bearing in mind for now that 3.5 per cent of the UK's population over the age of fifteen amounts to no more than 1.8 million people.

I started this chapter urging readers to look beyond the usual tropes of complacency-inducing climate optimism, as well as the kind of climate pessimism that reduces people to disempowered bystanders. I understand only too well why it is that most politicians and many campaigners still default to the warm

embrace of climate optimism, but we know now that such facile escapism is a betrayal of anyone looking for authentic reasons to be hopeful, and a betrayal of young people in particular. What we can be is resolutely hopeful that we'll make a much, much better job of it over the next thirty years than we have over the past thirty years, starting that process with enough humility to listen properly to the passion and the anger of young people.

It's time to remind ourselves exactly what the science of climate change is telling us, before looking at two hugely important areas of potential hope: in the technological revolution already going on all around us, and in today's totally unprecedented openness to change on the part of more and more people in every walk of life.


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the increase in the global average temperature to well below 2ºC above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5ºC above preindustrial levels.'

It still seems difficult to imagine that just half a degree can make that much of a difference. When one's only experience of temperature change is tweaking the thermostat, or seeking out sunshine abroad, it seems improbable that the future of life on Earth (not just for us but for all life forms) depends on a mere 0.5ºC. But it really does, as I'll explain later.

What made the Special Report all the more impactful was the uncomfortable reminder that the Paris Agreement wasn't exactly the great triumph that everyone felt obliged to present it as at the time. As I mentioned in Chapter 1, it quickly became clear in the cold light of a post-Paris dawn that even if *all* the voluntary National Commitments signed up to in Paris in 2015 were actually delivered on (a highly questionable proposition anyway), that would still result in an average temperature increase of more than 3ºC by the end of the century. And that's a truly horrendous prospect: at 2ºC, things are going to be utterly hellish; at 3ºC, it's essentially game over for human civilisation. Which meant, confusingly, that the Paris Agreement was both an incredible breakthrough *and* a death sentence, not just for the small island nations, but pretty much for the whole of humankind.

The authors of that 1.5ºC Special Report couldn't possibly have been clearer in terms of telling the politicians what's really happening and how they should respond. Here's my shortened version of their 'Summary for Policymakers':

- Set aside, once and for all, that 2ºC threshold, on the grounds that it will absolutely *not* ensure any kind of 'safe operating space' for humankind in this, let alone the next, century;
- Understand that the difference between staying below 1.5ºC rather than 2ºC is not a small matter. In fact, it's massive, in terms of impacts on agriculture and


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With heat (for use both in buildings and industry), it gets a little harder. Decarbonising technologies exist, but they tend still to be more expensive; building and appliance standards are nothing like as demanding as they need to be; and energy efficiency is still seen by most politicians as a 'nice to have' rather than the absolute cornerstone of everything we have to do. Transport accounts for around 15 per cent of global greenhouse gas emissions, with fossil fuels still providing almost all the requirements for ground-based transport, shipping and aviation. It's here that we're going to have to see some of the biggest changes, driven through by a combination of new technology, market mechanisms and a radically different approach to urban planning.

In all these areas, we need to go after the quick wins and the low-hanging fruit that is still out there, while acknowledging that new policy (based on a combination of regulation, incentivisation, pricing and even 'nudging' to bring about individual behaviour change) can take many years to achieve substantive outcomes. And that's particularly the case when it comes to thinking about emissions from land use, food and farming.

It's understandable that the focus of policymakers should have been on the 75 per cent of total greenhouse gas emissions that come from energy and industry. But what's become clearer and clearer over the past few years is that we now need to pay equal attention to the remaining 25 per cent of emissions that come from agriculture, deforestation and wider land use changes. In 2017, a paper from The Nature Conservancy, one of the leading NGOs in the US, on 'Natural Climate Solutions', concluded that between a quarter and a third of the emission reductions required under the Paris Agreement could actually be delivered by 're-greening the planet' – through reduced deforestation, forest restoration, peatland and wetland restoration, enhanced sequestration of carbon in the soil, and reduced emissions from both livestock and rice production. As Mark Tercek, former CEO of The Nature Conservancy, said: 'If we're serious about climate change, then we're going to have to get serious about investing in


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