

INTRODUCTION

Welcome to a new era

Almost every year since records began, our species has had more energy at its disposal than it had the year before. For the past 50 years, the growth rate has averaged 2.4% per year, more than tripling in total over that time. For the century before that it was more like 1% per year, and as we go back through history, the growth rate looks lower still but nevertheless positive, give or take the odd blip. We have been getting continually more powerful, not just by growing our energy supply, but by using it with ever more efficiency and inventiveness. In doing so, we have been increasingly affecting our world, through a mixture of accident and design. The restorative powers of our planet, meanwhile, have remained broadly the same, so the *balance* of power has been shifting – and it has now tipped. Throughout history, the dominant cultures have treated the planet as a big and robust place, compared to everything we could throw at it – and that approach has not, generally speaking, come back to bite us.

But sometime in the past few decades, things changed. We can argue about exactly when, but let's just say that it happened recently. Around 100 years ago, in the First World War, we couldn't have smashed the whole place up even if we'd tried. But 50 years ago, with nuclear energy especially, it became clear that we could totally mess things up if we made big enough blunders. Today, we don't have to blunder at all; if we don't try hard enough NOT to we will wreck the whole environment. And 50 years into the future, if the energy-use trends continue, the world will be more fragile still, compared to our ever-increasing might.

For another perspective on human energy growth, think back to 24th December 2004, when Asia experienced a tsunami that killed 230,000 people. It was a big natural disaster that most people reading this book will remember. The energy released in that wave was about equivalent to 24 hours' worth of human global energy consumption at the time. 150 years ago, it would have taken humanity about a month to acquire and use the same amount of energy. Today it only takes us 18 hours¹.

The 'big people, small planet' syndrome has a name that is going to be useful to us; the **Anthropocene**. I use this simply to mean the era in which human influence is the dominant source of change to the ecosystem.

Our arrival in this 'Anthropocene' has been like a pH titration experiment. In the lab, acid might be dripped into a flask of alkali solution. For ages there is no colour change at all because the alkali still dominates, then suddenly, one more drip and the balance shifts. The flask turns acidic, the indicator turns from blue to red and the world inside the flask becomes an entirely different place. In our global experiment, we have been adding more and more human power into the mix but for millennia the planet's restorative power still dominated. Although we wiped out some other species, we have broadly got away with treating the world as a big sturdy playground. Suddenly it is fragile. The playground will break unless we dramatically change the way we play in it. And this particular titration experiment has also been a crazy one because whereas in the science lab the closer you think you are to the balance point the more slowly you add the acid, we are pouring our power on faster and faster.

In the past, humans have always been able to expand as they have developed, but suddenly now, and for the foreseeable future at least, we can't. That is a massive change. Even for those who are starting to view the one planet constraint as temporary (and I'll debunk this later), the physicist Stephen Hawking put it like this: 'We will not establish self-sustaining colonies in space for at least 100 years, so we have to be very careful in the meantime'².

There is no Planet B³.

A handbook of everything

This is a book about the big picture of life on our small planet. It is an evidence-based practical guide to the make or break choices we face now. It is about taking the chance for us to live better than ever and heading off the threat of living worse or not at all. It is about the difference any of us can make, despite the global nature of the challenges.

A few years ago, all my work focussed on climate change. That wasn't because only climate change mattered, but because at the time it seemed like a useful and practical simplification to treat this one component of the Anthropocene challenge in relative isolation from the rest of the rich soup of environmental, political, economic, technological, scientific and social issues of the day. But it became increasingly and inescapably clear to me that climate change had to be dealt with as a multi-disciplinary challenge.

It also became ever clearer that whilst climate change presents a tangible environmental problem, it is not the only one, and won't be the last. We have had decades of warning about climate change. But we have wasted that time through our denial, first of the problem itself and then of the nature of the solution that is required, and through the unspeakably clumsy way in which we inch towards the kind of global agreement that might actually help. In the Anthropocene, we can't rely on every challenge giving us so much warning. We'd better practise our global governance because we might need to respond to something just as intangible as climate change on a far shorter timescale. What exactly? That's the point; we don't know yet. One of the key things we need to understand is just how much we don't know.

I have called this a handbook because it is intended to inform decision making at every level, from the individual to governments. Everyday tips are mixed in among messages for policy makers, voters and business leaders. Some relate to what I would call the 'intensive care' end of things; how we can manage the known and tangible challenges such as climate change, food security and biodiversity. Mixed in with this, and inseparable from it, are the deeper underlying questions of how we can get

better at heading off these kinds of challenges in advance; questions of ‘long-term global health’.

I hope you enjoy the perspective-forcing facts, stats and analysis, some of which surely have to make us all gasp at the way we live, and the opportunities to do better.

I have taken on just about everything at once, simply because no other approach will do. It doesn’t work anymore to look at technical questions of food, energy, or climate change separately from each other or separately from questions of values, economics or the very ways in which we think. All these things are too inescapably intertwined for the traditional ‘one bit at a time’ approach to be adequate. We must look at all these complex problems concurrently, and using a range of disciplines or *lenses*.

For this book, that means we are going to move from the very big picture to the specifics and back again, and from one discipline to the next as the need arises. I hope this makes for an interesting ride.

In over a hundred talks, workshops and seminars, surely by now I’ve been asked every question it is possible to think of: ‘Who should be leading on this?’; ‘Are humans too fundamentally selfish to deal with climate change?’; ‘If I don’t fly, won’t someone else take my seat?’; ‘What’s the point in me doing my bit when I’m just one speck among seven billion?’; ‘Do we have to halt economic growth?’; ‘Does it all boil down to population?’; ‘Why should I bother when we all know we’ve had it anyway?’; and so on. I’ve felt naïve jubilation at the simple freedoms and opportunities that a low carbon world could have. And in writing *The Burning Question* with Duncan Clark, I have fought through the gloom that came from contemplating deeply, day after day, how far away almost everyone seemed to be from grasping what we came to see as the essential basics of climate change, let alone confronting the issue properly.

And since then I’ve seen small but real steps that provide a lot more grounds for hope. I’ve reflected and jostled with the dilemmas and hypocrisies of my own lifestyle. I’ve felt foolish at the futility of not flying and guilt at doing so. I’ve loved the cycling and the excuse to be scruffy at work and I’ve also been

When it's all so global, what can I do?

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sobered by my friend's head injuries after he tumbled off his bike on his commute home. By now, surely, all the world's biggest dilemmas and conflicts have already gone on in my own mind? Of course, I know that's not true. But let's just say that I've done quite a lot of thinking, talking and sense-making. I have picked the brains of a lot of smart people. And now, with the help of as much collaboration as possible, it is time to put it in a book.

This book is about how we can make the transition into a new mode of living that works for us and fits our new context – a way of operating that won't smash the place up and will allow us to thrive despite our power.

When it's all so global, what can I do?

This is one of the crunch questions of our time.

Whilst our collective power has been rising, so too has the population, and each one of us is becoming an ever-smaller part of the whole. It is easy to feel like a speck or an ant in the unstoppable trajectory of human-kind's time on the planet Earth. It can be tempting to think that, whether or not we like where we are heading, there is little influence that any of us can have.

It is a valid concern. As we will see later, at the global system level, there are powerful feedback mechanisms at work that have so far been immune to most of the efforts made not just by individuals but by organisations and even nation states. At the moment, humanity can be seen as slave to a dynamic interplay of growing energy, efficiency and technology, a persistent trajectory whose broad trend we have so far shown little or perhaps no ability to influence. To give just one example, it is a stark truth that the sum of all the world's climate action has so far made little or perhaps even zero detectable impact on rising global emissions. Ever more energy and technology may have brought us many good things so far, but quite suddenly it has become dangerous to continue on the same pathway without greater control. And to achieve that, our species will need to both raise and *change* its game.

We urgently need new problem-solving *methods* from those that were honed in the days when the nature of the problems

was altogether simpler. But changing the way we think isn't simple because we are dealing with grooves of habit that have been worn deep over the centuries.

One way of looking at it is to say that we need to *rebalance* our evolution. Our technological brilliance has taken us into a situation in which we need to quickly evolve in other ways as well. Life can be better than ever before but that won't happen unless we can balance our technical genius with the development of some very different and complementary thinking skills to go with it.

Is our failure so far to take the reins proof that we are powerless to do anything to affect things at the global system level? I don't think so, but in this book, I am going to take that question seriously. We are going to explore the big system dynamics and ask what they tell us about how the individual can actually be useful. I think we can each have far more impact than most people assume, but we need to get a lot smarter at understanding which kinds of things make a difference and which don't. We need to think beyond the immediate and direct effect of our actions and ask more about the ripples that they send out, and how the actions of one person, company or country might get multiplied rather than muffled or counterbalanced by the rest of the system.

Although it runs against some of my instincts to tell anyone what to do, this book contains plenty of suggestions. I have done this because it is so easy to think there is nothing any of us can do and I want everyone to see how that is not the case. Often my suggestions are very simple. And don't worry, this isn't a lifestyle guide for perfect people; I'm far from one of those myself and don't expect you to be one either. But like me, you care a bit and you are interested to know more about what makes sense on every scale, from the personal to the global. So, I hope you find some stuff here that you can use.

What values underpin this book?

This critical topic of values gets a section of its own towards the end, where we will look from a purely practical point of view at which values can and can't help us to thrive over the next

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hundred years. But for now, I will just note a few that underpin the book. If you can't live with these, or something fairly similar, then there might be little point in you reading on – so at least I've saved you some time.

I have written from the perspective that all people have equal intrinsic value as human beings. Rich, poor, black, white, American, European, African, Chinese, Syrian, Muslim, Buddhist, Christian, Atheist – *everyone* has the same intrinsic value. For many, this might sound too obvious to be worth writing down, but all too often the values behind ideas are not made explicit even though the implications are usually enormous for economics, food policy, climate policy and just about everything else you can think of for thriving in the Anthropocene. To be very clear, the same principle of inherent equal value of all human beings is universal. It applies to all world leaders, purveyors of both real and fake news, tireless aid workers, left wingers, right wingers, billionaires, paupers, your own kids, other people's kids and even the call centre employee who rings you when you are having dinner with your family to try to persuade you to sue for an accident that never even happened. A person's inherent worth is independent of their circumstances or the choices they have made in their lives or have had made for them.

As far as other life forms go, they too deserve a place – because of their own sentient experience, not just for the practical reason that humans need them for food and medicine. My son asked me about the relative value of a woodlouse and a human embryo of the same size. I can't answer that question. Let's just say, for the purposes of this book, that all forms of life matter.

I'm going to try to stay consistent with these values throughout, but it won't be easy, since so much of what goes on, in both everyday life and in politics, is actually in stark contradiction with this simple principle. And just to be clear, you don't have to dig all that hard to find that plenty of my own life conflicts with these values too – I'm no more of a saint than anyone else is.

If you do broadly agree with these values in principle, then let's explore a few implications. It means that whilst you might want good things for your own country, you don't want that at the

expense of other countries. If you want your country to be ‘great’ or even ‘great again’, you would be careful not to go about engineering that at the expense of any other country’s ‘greatness’. It means that if you want the best for your kids, the way you go about it is not at the expense of other people’s kids. It means that if you are in hospital trying to ensure that your elderly parents don’t die unnecessarily, you are not trying to ensure they get the best care if it is disproportionately at the expense of resources for others who need it just as much (and this is challenging – I’ve been there). It means, for example, that if you were given the chance to vote on whether or not your country should be in the EU, you would be thinking not only about your own interests but about the interests of your whole country as well as the interests of the whole EU *and* the wider world. It means that, when you go shopping, what you buy is not just the product itself but also a whole set of implications for everyone who was involved in producing it. This is the hidden stuff, almost entirely ignored by the advertising industry, which we need to find a way of tuning in to.

What can we aim for?

Is it possible to have a universal vision that floats nearly everyone’s boat? Whilst the idea of limiting climate change seems like essential damage limitation, in itself, it spectacularly fails to excite most of us. More often than not, it gets framed primarily as the need to forego things we enjoy. And since humans – all of us – hate thinking about anything unpleasant, the temptation to switch off is hard to resist. Like it or not, that’s how our psychology works. Unbelievable fantasies about the future don’t work either – creating a sense that what is worth having is impossible.

Luckily, there is plenty of scope for realistic improvements that are well worth getting excited about. So far, we have not exactly managed to optimise the quality of human experience. Dealing with the big issues gives us a chance to reengineer things for the better. We don’t spend enough time imagining good futures, so we end up on a business as usual pathway, just because we haven’t really thought properly about anything better.

Not the last word. . .

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I don't want to prescribe too tightly because we all see things differently (thank goodness), but here is my attempt at sketching out what I think we can aim for and most of us might want. I'm not anticipating perfection, but the closer we get, the better life will be, and even trying to head in this direction should be a good experience.

Here goes. This book is geared towards a future along these lines.

The air is fresher. Life is healthier, longer, more relaxed, more fun and more exciting. Our diets are varied, tasty and healthy. More of us get out as much as we want to, both socially and physically. Travel is easier – but we spend less time in transit. We feel freer to live life in whatever way seems meaningful to each of us at the time, in negotiation with other people's equal right to do likewise. There is less violence at every level. Cities are vibrant whilst the countryside teems with wildlife. Our jobs are more interesting, and the pressures are more often self-imposed. We expect, insist on and get higher standards of trust and truth, in politics, in the media and in fact everywhere. We are better connected to the people around us and to our sense of the global community. We give more of our time and attention to others and we notice and enjoy more of what is going on around us. We might compete with each other for fun but where it really matters we collaborate better than ever before.

Of course, within this, there is plenty of fleshing out yet to be done, and enormous variety in exactly how each of us will live within it. Please feel very free to add details and perhaps think about where you personally might want to fit into life on Planet A.

Not the last word...

A lot of this book is just about laying out evidence that largely speaks for itself, but where I've made interpretations I hope you find they make sense. Of course, I don't expect to have written the final word on any subject; all I offer are rough outlines, waiting for improvement. I hope they are a sensible start point. If I've got something wrong, I hope you will notice. I hope

debates will rage, as they urgently need to. I will be delighted by anyone who rejects anything I've written in favour of something better, and where you think I've missed bits out, I hope you'll fill in the gaps, so that by the end, your understanding will be better than mine. Please send constructive feedback and improvements to Mike@TheresNoPlanetB.net. However flawed my attempt, I am confident that it is better to have a rough sketch of everything at once than to see things through only one lens at a time, however perfect each view⁴.

If you use Twitter, #NoPlanetB would be one way to share ideas.