

Eckart von Hirschhausen

Oh dear, Earth!

528 Pages

ISBN 978-3-423-28276-5

Sample Translation

by Sarah Pybus

Table of contents

Chapter 1 – The Journey Begins

Chapter 2 – Coming & Going

Chapter 3 – Eating & Digesting

Chapter 4 – Drinking & Preserving Water

Chapter 5 – Inhaling & Exhaling

Chapter 6 – Heating & Cooling

Chapter 7 – Needing & Consuming

Chapter 8 – Coming & Going

Chapter 9 – Protecting & Watering

Chapter 10 – Caring & Disposing

Chapter 11 – Talking & Listening

Chapter 12 – Pioneering & Doing

Epilogue – What Now?

P. 11-20 (Introduction)

A LATE AWAKENING

Since I was a child, I've loved spending my summer holidays in Austria – the mountains, the nature, the lakes, the sweet treats. It's all so relaxing. Usually. But this idyll is becoming increasingly fractured. Last year, a mountain guide I know told me about his friend's accident. "He was one of the most experienced climbers around. But the crag he'd safely scaled many times before simply broke away beneath him. It's because of climate change." What? Not sheer misfortune? Why are the Alps crumbling? What I didn't know then was that up in the peaks, the insides of mountains are often held together by the cold. The water acts like cement in all the little cracks and fissures. As it gets warmer, it melts, expands, and the bond that has held for millions of years is lost. And the impact is intensifying.

And now we are losing massive swathes of forest too. This has become apparent on my hikes in Germany, but it's even more striking in our home away from home. On some of the slopes, the forest is no longer green; heat and aridity have turned it brown. Wherever you look, bare trees have given up the ghost in the middle of summer. It's bizarre to realise that even a weakling like me could push over trees three times my height because there's nothing really holding them in the ground.

The weather is changing too. Instead of regular summer storms that release their rain in the afternoons, energy collects in the clouds for several days before erupting in concentrated, extreme weather events. A little way behind our hotel, an entire valley became impassable. Dams broke, houses flooded, mudslides and rock avalanches destroyed entire villages. The walls are being raised now, and things will be good again. But the cracks are showing.

Let's return to the previous summer, in Italy. I don't like getting saltwater in my eyes, so I wore goggles to swim in the Mediterranean. They seemed foggy, so I took them off in the water, cleaned the insides, spat into them (trusting in my saliva's special anti-fog properties) and put them on again. The view below the water was still hazy. I had no idea what was going on. Had my plastic goggles tarnished because I hadn't stored them in the case as instructed? Was I developing cataracts? Then the scales fell from my eyes. It wasn't the goggles that were hazy – it was the water itself. The visual impediment I had assumed to be inside my

goggles was, in fact, all around me. The sea was full of tiny pieces of plastic that refracted the light. Here and there I saw plastic bags ground down by the sand, rocks and tides, bags that were still on their journey from the macro world to the micro, that would wait decades before doing us a favour and finally decomposing. I felt sick and disgusted. I could have cried at what I saw. The level of pollution, the realisation that I was part of this disregard for nature while also feeling like a 'victim' because I'd been robbed of the joy of swimming in the sea, of seeing the vast expanse above and below the water. And because, in that moment, I realised how much easier it is to pollute the water than to remove all the detritus.

In the summer of 2018 – the summer of the heatwave – we visited friends in France. Their penthouse apartment was unbearably hot. The nights were the worst. I struggled to sleep. The sun had disappeared, but the temperature simply refused to drop. We hung up damp towels, covered the windows during the day and showered constantly to cool ourselves down. But the heat was unrelenting. In a major stroke of luck, I snagged a (now rare) air conditioning unit, but it was loud. It moved the air around, seemingly with a cooling effect, but the electric motor heated up the back of the unit and warmed the room in the process. So that didn't solve the problem either.

The region had always been hot, but this summer there were simply a few degrees too many. We couldn't relax because everything we considered fun was too strenuous. Cycling was too sweaty, the pool was so warm that it wasn't even remotely refreshing, the fields were brown and dry, and the apricots we'd harvested so gleefully in previous years withered on the trees. At the seaside, the sand was way too hot for bare feet. Not exactly the summer escape we'd been hoping for.

Admittedly, I don't cope well with heat. I had experienced various climate zones as a medical student, spending part of my practical year in South Africa, visiting the tropical rainforest in Brazil, and my Berlin apartment sizzled in the sun thanks to its huge windows. But now I was in my fifties, my student days long behind me. Were my complaints about the heat a sign of age? Or a sign that climate change is now overtaking Europe too?

Not that this should come as a surprise – the climate crisis has been making its catastrophic presence felt for quite some time. I learned about the man-made greenhouse effect back in school and I understood it all, at least in theory. But my three lightbulb moments – the crumbling cliff, the dying forest and the polluted water – made me realise that this was no longer a fictional future or confined to faraway countries. This was about the here and now, in the middle of Europe, in Austria, Italy and France. Even in Germany, temperatures reached 42°C. The heat wasn't a 'wave', it was a plank that smacked us across the face. Like a sauna without a plunge pool. Even outdoors, we found ourselves wanting to open a window – truly bizarre. 2018 was the first time that the heat had really got under my skin, affected my disposition, robbed me of my zest for life, my essence. My body and soul were overwhelmed; I became sluggish and morose and all I wanted to do was get away. But where?

I read the weather reports, announcing more and more record temperatures. I read about heat-related deaths, forest fires, Indian cities where temperatures exceeded 50°C and the water supply failed. And I asked myself what would happen if this were no longer the exception, but the new rule? What if everything grows drier still, hotter still, more hostile to life? And what can we all do about it, what can I do, or has that ship sailed already? There are moments in life when you have no choice but to face up to certain issues.

That same summer, on 20 August, a Swedish girl – her name then unknown – spent her first day in front of Stockholm's parliament building instead of going to school. She'd made a cardboard sign declaring a 'School Strike for Climate' (or Skolstrejk för Klimatet). Greta Thunberg was just fifteen at the time. Her parents had tried to talk her out of it, but Greta was determined – and that determination was extremely infectious. She may have spent her first strike day alone, but soon she was joined by more and more young people. The



images were shared on social media all around the world, and by December, twenty thousand students were taking part worldwide. 'Fridays for Future' was born, a global movement. That same month, Greta was invited to the COP24 climate conference in Katowice. Her speech hit a nerve. 'I don't care about being popular. I care about climate justice and the living planet ... Our biosphere is being sacrificed so that rich people in countries like mine can live in luxury.'

Did she mean me as well? Privately, I'd always considered myself to be one of the 'good guys', as most people probably do. But while Greta took the train from Sweden to Davos to avoid harming the climate, I was pondering my air mile rewards.

Less than a month later, I received an email: 'Hi Eckart, we both attended Schadow high school. Last Friday, thousands of students all over Germany demonstrated against climate change. I'd be delighted if you could appear at a 'Fridays for Future' demo on 15 March and briefly address the students. We've had other celebrity guests – Bully Herbig recently took part.' Below were the contact details for one Luisa Neubauer. Never heard of her. But my curiosity was piqued.

Luisa had met Greta in Katowice and started to develop the idea for public climate strikes in Germany. After speaking on the phone, we met in Berlin with one of her fellow campaigners and my brother and his family. Christian is Research Director at the German Institute for Economic Research (Deutsches Institut für Wirtschaftsforschung), focusing on the energy industry, the disastrous delays to the fossil-fuel phase-out, and the hidden costs of nuclear energy. I figured there was no harm in giving young people access to expert knowledge. I was way off the mark. They didn't need tutoring – they were extremely well-informed and knew how crucial renewable energy is to achieving the 1.5°C target set out in the Paris Agreement, and to which Germany has committed. I paused as it occurred to me that we are lumbering the next generation with a multitude of unsolved questions and astounding amounts of responsibility.

By the evening, we had a plan. I was going to say something at the demo from a doctor's perspective, but not alone – I would be joined by Christian and his daughter to show that this is a topic that unites generations and disciplines. Outside influences had suddenly brought a whole new dynamic to our family and (as is probably true of most families) we weren't always of one mind. But we began to discuss other things, discover new things in common and talk about the issue that concerned us all.

Little by little, I found myself taking on a public role too. Through 'Scientists for Future', I took part in the federal press conference for the first time – not as a journalist, but on the other side, on the podium. 27,000 scientists had signed a petition telling politicians that young people are totally justified in their concerns. I had suddenly become a climate activist of sorts, a calling I had never really felt. I didn't take part in the German student movement of 1968 (I was only born in 1967). But if you want to stop being passive, does that automatically make you an activist?

With their zeal and perseverance, the youngsters shook me out of complacency and plunged me into a midlife crisis. Was it time to sit back and relax or stand up and revolt? I heard their shouts in my ears: 'System change not climate change!' What are we, the children of freedom, peace, economic miracles and belief in growth, leaving behind for future generations? How many resources should each of us consume? Is it true that, in the last fifty years, we have released more fossil fuels into the air than ever before in human history, with the result that species will be wiped out on a scale not seen since the dinosaurs? That our own actions have brought our civilisation to the brink of collapse? If this is true, why is there so little anger? Have we deliberately suppressed the issue or communicated it in the wrong way?

After the summer heatwave, I knew that this was no longer just about polar bears and the rainforest – this was also about the health of people in Germany. This was the connecting piece I'd been looking for. Even though matters like global health weren't so much as mentioned during my studies, I had always been



interested in cross-sectional issues, in communication and contexts. I too regularly failed to make the right decisions in a globalised world. Even healthy eating became a science in itself: should I buy organic apples from New Zealand or the apples from my region that require great effort to be kept fresh? Are the fats in avocado good enough to justify the climatic fallout? And what exactly is palm oil doing in my biscuits – and in my petrol – if it means cutting down the tropical rainforest, the very thing our planet needs to breathe? It quickly became apparent that it wasn't enough for me, as an individual, to do without a plastic straw and use a jute bag after driving to the supermarket – just like, as a public figure, I am now duty-bound to form an opinion on all these issues. I need to seize the opportunity to raise awareness of the risks the climate crisis poses to our health. And that our health depends not on doctors, clinics and tablets, but on a healthy planet. I decided to seek out experts who could answer my mounting questions. My journey took me to the Potsdam Institute for Climate Impact Research (Potsdam-Institut für Klimafolgenforschung), the German Federal Ministries for Health, Environment and Economic Cooperation, the Federal Foreign Office, and onto podiums at the German Evangelical Church Assembly (Evangelischer Kirchentag) and the German Care Conference (Deutscher Pflorgetag). I spoke with NGOs (non-governmental organisations) like Greenpeace and with the Catholic rural youth movement. I got to know pioneers such as Jane Goodall and Ernst Ulrich von Weizsäcker and spoke with Harald Lesch about why the laws of nature are non-negotiable. I ate meat again at Sarah Wiener's farm with a clear conscience, and Dirk Steffens explained to me why the loss of insects and biodiversity will rob us of more than just honey. Again and again, I stumbled across problems that I didn't even know existed, let alone how far off track we've gone. Even a professional comic would struggle to laugh. But maybe that's exactly what we're lacking – the humour, the change of perspective, the out-of-the-box thinking to understand that we are in truly dire straits.

This book is a travelogue, not the bottom line, because while I was writing, we were consumed by a new crisis: coronavirus. And while this might be totally new, it wasn't totally unexpected. When viruses jump from one species to another (i.e. to humans), isn't that connected to the way we treat animals and their habitats? Unbidden, the coronavirus also confronted us with other issues: what are the boundaries of medicine, what is an individual life worth, and how much does my health depend on the health of those around me – or even those on the other side of the planet? Have we forgotten that we are vulnerable, mortal and finite? Even before 2020, air pollution from fossil fuels was the number one killer – and shortly after the pandemic began, studies showed that people who have previously suffered lung damage are particularly susceptible to the virus. More people died of severe cases of Covid-19 in the areas with the dirtiest air.

Climate protection, species protection, health protection – without leaning into conspiracy theories, there is a link here! And so this 'subjective work of non-fiction' attempts to remove some of the boundaries within which topics are often tackled. Science thrives on finding truths beyond subjective perception. This is precisely why we test medications in double-blind trials with placebos for comparison: to rule out expectations and placebo effects. But if what the doctor and patient think, feel and expect is so important for healing, then surely rationally researched medications and empathetic information are both required. This is why, in this book, you will find a chaotic mix of factual information and stories, of the private, political, and poetic. Hopefully, some of my discoveries will chime with your needs, experiences and hopes. And you can take all the time you need to mull them over.

With hindsight, we should probably be grateful for the 2018 and 2019 heatwaves. Having got a taste of the hell to come, many people – including myself – were ready to take seriously what scientists had been saying for decades: climate change is the greatest health hazard of modern times. And this means it is also our greatest opportunity.

Rarely, when writing a book, have I been so aware of the limits of my own knowledge. I've given you

everything I have. My knowledge at the time of submitting the manuscript, my blood, sweat and tears, my doubts, and the thoughts of the people I met. And yet what I write today may be obsolete tomorrow. It's definitely lacking. It's hard for me to accept, but that's the 'new normal'.

Despite the dramatic nature of the topics in this book, there is hope. It takes more courage to dream, marvel and laugh, to develop ideas that come not from the individual but from the power of community, because this is something that humans do well: collaborating, inventing and overcoming crisis through action. There are many good, inspiring concepts out there. We know what we need to do, we just have to genuinely want it, politically and privately. Living differently doesn't necessarily mean doing without; it can often increase your quality of life. But to do this, we need to picture how things could change. And how they could improve – because our lives could be so much better!

Are you ready for the journey?

Then let's go – I hope you enjoy the ride!

S. 27-32 (Jane Goodall)

HOW APE-LIKE ARE HUMANS?

'Truly man is the king of beasts, for his brutality exceeds them.'

Leonardo da Vinci

It might sound melodramatic, but rarely have I met a woman as charismatic and yet humble as Jane Goodall. At the age of 26, she gained worldwide fame – and met with hostility – for her audacious plan to experience chimpanzees up close, in the wild. Now, aged 85, she continues to channel all her energy into the matter so close to her heart: ensuring the survival of humans and animals.

I'd wanted to meet Jane Goodall in the flesh for many years. And then, quite suddenly, I had the chance to interview her during her brief trip to Germany. I accepted immediately, dropped everything and travelled to Düsseldorf, where she was to be presented with an honorary German Sustainability Award. On the way I read her biography, increasingly impressed by her evolution from a young woman with no academic background (but a clear objective) to one of the world's most famous female scientists. How, growing up in Great Britain, she was threatened by German bombs, but today considers Germany an ally in putting sustainability and species protection on the international agenda. And how she used her charm to counter the territorial behaviour of male academics who refused to believe a young woman without an academic degree when she stated that there's actually not that much separating apes from the 'centrepiece of creation'. To put it positively, we humans are much more a part of nature than we realise and would sometimes like to admit. At an age when others would have been retired for twenty years, Jane continues to work unbelievably hard. Jane was still on her way from Belgium to Germany, so the schedule was pushed back. I waited in the hotel lobby, my heart pounding. Then, suddenly, I saw her before me, a delicate, girlish woman who was struggling with her voice. I offered her a throat lozenge. She laughed. 'Oh no, I do what opera singers do. I have a secret solution. Do you know what it is? Whisky. I always carry a little bottle in case I start to lose my voice. It has "Apple Juice" written on it. The colour's exactly the same. But it's whisky. Just a tiny sip, but it helps.' You meet your idol and she breaks the ice with humour and alcohol. Jane spoke quietly, with concentration, and there was a certain melancholy in her wise, warm gaze. Our conversation would fundamentally change my understanding of the connection between Earth, animals and humans.

Over the years, Jane learned the language of the apes, and she demonstrated a few impressive calls for me. I would never have expected such blood-curdling sounds to come out of such a petite woman. She explained that these were the cries of a dominant male. That much was obvious, even without the explanation. Then she showed me how to reduce aggression in the animal kingdom with submissive gestures and physical contact. She told me to play the dominant male and instructed me on how to greet her:

'We haven't seen each other for a long time. I'm nervous because you have a much higher rank than I do. You're sitting with bristled fur and are a bit agitated too. She lowered her head and moved closer.] So I approach, slightly crouched, and emit a soft "achachach".' And then she whispered something nice but unintelligible in my ear, placed my hand on her head and hugged me. I asked myself – then Jane – what the appropriate reaction would be.

'If the male likes the female, he hugs her back. If not, he goes "ughughugh".' She waggled her hand defensively. Feeling like a schoolboy in a sex education class, I asked whether I might hug her.

'You may.' And we both laughed.

Now that we had been introduced, I wanted to know what focusing intensively on our closest relatives had taught her about humans. It seemed to me that many of the destructive aspects of our ego are connected to power, status and territorial behaviour – pretty ape-like when you think about it. I also asked her whether the world would be better if it were run only by women. She smiled. 'There's a story from Africa that I love. The tribe is like an eagle, the men one wing and the women the other. If there is no balance, then the eagle can't fly.'

But if we're so smart, elevating ourselves above the animal kingdom through language, understanding and preparing warm meals, why do we use our abilities more often to dominate and destroy than to forge bonds?

'We've clearly lost the wisdom of our ancestors who, whenever they made a decision, considered how it would affect the next generation. Today, we only think about how decisions will affect ourselves.

Theoretically, we can learn from the past and plan for the future. We are the only beings who can do that.'

Then she turned the tables again, looking at me for a long time before posing a very direct question. 'How can it be that the most intellectual creature to ever walk this planet is in the process of destroying its own home?'

I swallowed three times, unable to find a satisfactory answer to this key question. In silence, I racked my brains for a smart explanation, but came up with nothing even remotely adequate. So I asked Jane for her opinion. 'We're downright trapped in our materialistic society, which revolves around money and power', she said. 'It's as though the connection has somehow been broken between our clever brain and the human heart, love and passion. But I believe that we can use this potential again.'

Scientists often strive for totally objective studies. Jane has frequently been accused of excess emotion, rather than detached reporting. But perhaps you need an emotional connection to a topic before you can truly be interested in and moved by it. I have long been reproached for using humour to communicate a topic as serious as health. Now I had the once-in-a-lifetime opportunity to grill the expert to end all experts, and the question just slipped out: 'Do chimpanzees have a sense of humour?'

Jane laughed. 'Of course. I saw plenty of examples out in the wild. A big brother laughing his head off as his little brother chased him round a tree, trying to get his stick. Every time, the big brother would wait until his sibling had almost reached him, then quickly pull the stick away and laugh. And the little guy cried with rage. Chimpanzees tickle each other and have a typical expression known as the "play face".'

Now our talk turned more serious. I asked her for her view of the future, as someone who has seen many species go extinct and witnessed the destruction of many places in Tanzania where she has conducted her life's work. 'When I began my observations in the 60s, I entered an almost untouched forest. By the 90s, the trees had disappeared. But now they've grown back. We work with fifty-two villages, ensuring they have clean drinking water and medical care. Specialists teach the people how to create woodland gardens rather than chopping down the rainforest. We award school scholarships to girls. Many residents are proud of their forests now and help to protect them. For me, young people are the most important reason for hope. As soon as they know where the problems lie, as soon as you listen to them and help them take action, they roll up

their sleeves and get working. All around the world.'

Jane's eyes lit up when she talked about her 'Roots and Shoots' programme. For decades, young people have been launching their own projects and learning things that will stay with them forever. And since we well and truly broke the ice with our ape sounds, I worked up the courage to ask Jane about her own death.

'In a way I'm looking forward to it. Death is either the end of everything – which would be absolutely fine – or there's something else beyond our existence, which would be fascinating to explore. I don't know when my body will collapse or my brain will give up. The closer I get to that point, the more fervently I wish to raise awareness and show people that their actions do make a difference. It might seem like an individual's actions are barely significant, but if a billion people make more ethical decisions, they become a whole lot more significant.'

The time had come for Jane to leave; she was being honoured for her life's work that very evening. Rightly so. And she isn't finished yet.

Jane wowed me with her radical connection to nature and her tireless commitment to heeding and taking action against the threat to our habitat. As a doctor and science journalist, I'm not used to being asked a deeply personal question that also affects humanity as a whole: how can it be that we constantly emphasise our cleverness while also destroying our own home? Since our meeting, this question has got its claws into me. It drives me to look for answers. I repeat it at every appearance I make, in every speech, every lecture to students, and it's also the central question of this book. There must be better ideas than destroying our own home. Surely we're not that stupid, are we?

S. 56-61 (Scherbensuche)

SEARCHING FOR FRAGMENTS IN GEOLOGICAL ERAS

'The individual is good, but people are bad.'

Karl Valentin

Brazil, 1992. I'll never forget the first time I turned on a tap and nothing came out. That was many years ago, but the culture shock has seared itself into my brain. I was a medical student, spoke a little Brazilian Portuguese, and witnessed a city improvising a water supply by bringing in tankers from far away after its groundwater sources and reservoirs ran dry. What little water there was, was carefully collected and used multiple times where possible. This trip would teach me even more about water and its limited availability. And about the Anthropocene, although the term didn't exist at the time.

I visited a friend I'd met on a train in Assisi as he travelled through Italy. Adriano was a sociologist and lived in a Franciscan faith community. He and his bishop, Luiz Cappio, were planning a highly unusual pilgrimage. They wanted to walk along the Rio São Francisco, from the river's source to its mouth, a pretty bold undertaking. The São Francisco is over 3,000 kilometres long, one of Brazil's most important water veins, and doesn't have consistent marked footpaths. But how does the famous poem go? *Caminante, no hay camino / Se hace camino al andar* – 'Traveller, there is no road; you make your own path as you walk.' I had the opportunity to join one stage of the hike, alongside three men and one woman walking not only in the service of the Lord, but also in the service of the river, which was on the brink of ecological collapse. Together with the locals, the pilgrims aimed to prevent this from happening. They filled a bottle with fresh, clear water at the river's source and carried it for a whole year – along with a statue of Saint Francis – to every village on the shore, every city, every community, uniting religious worship with environmental education. They recruited people to attend meetings at 350 sites along the river, lovingly referred to as *Velho Chico*, 'Old Chico', by the locals. Their journey culminated in a closing ceremony at the river mouth, during which the water in the bottle was poured into the sea, a sign of just how clean the water once was.

Why am I telling you this? It was on this journey that I first truly realised how extremely rich and privileged

my country is. It was the first time I had met people who had no power supply, no schooling, but what they did have were big hearts and many children. Wherever I went I was welcomed, invited to eat with them, celebrate with them and dance with them (within my limited skillset). I learned to love the country and the people. To this day, I envy them their profound spirituality and zest for life, things that many Europeans struggle to grasp today. In a time before the internet and social media, I appreciated the way that songs, rituals and symbols (such as a pilgrimage) were used to make people aware of the state of the river upstream and to give them a wake-up call. Above all, I appreciated the personal testimony of the pilgrims, their devotion to serving, rather than showing off their knowledge.

I may have lost contact with the group, but I can still picture them walking thousands of kilometres with nothing but flip-flops on their feet. I recently heard from some of the project managers at Misereor, the German Catholic Bishops' Organisation for Development Cooperation. They said that while many regional environmental projects were launched after the tour, some with success, it is becoming ever more difficult to fight the introduction of industrial toxins, dams and nuclear plants – and to help the local fisherman survive – with a president like Bolsonaro who denies the existence of both climate change and Covid-19.

The bishop's sermons during the pilgrimage directly reflected the idea behind my 'Healthy Earth – Healthy People' foundation: 'The river and the people are two sides of one reality; the blood that flows in the people's veins is the water of the São Francisco. If the river is healthy, then the people will be healthy. If the river is sick, then the people will be sick. And if the river should die, then the people will die with it.'

Looking back, I understand better that my experience by the Rio São Francisco gave me an insight into what is now known as the 'Anthropocene', the age of humans unable to grasp the scope of their actions and the impact they have on others and the future. Practically everyone I met back then lived directly or indirectly from the river, as fishermen or in agriculture, which relied on irrigation. In a way, 'Chico' was sacred to them. But the construction of dams and the many electric pumps acquired to cultivate vegetables for export – using a great deal of water – were seriously reducing the amount of water available. The lack of sewer systems and refuse collection services meant that the river was used to dispose of all sorts of waste. The further you moved from the river's source, the more filth you would find mixing in less and less water.

None of the individuals along the river had a guilty conscience; they were simply doing what everyone else did. There was no way of comparing the current state of the river with how vibrant it was two generations ago. In ecological psychology, this phenomenon is known as the 'shifting baseline' – an imperceptible but constant shift in the yardstick. Everyone ducks the issue, claiming that their personal contribution to water withdrawal and sewage is minimal compared with the huge and infinite river, worshipped and celebrated in song by their ancestors. But when added together, the contributions of millions of individuals can destabilise the system.

Welcome to the Anthropocene, a new era on Planet Earth. Geologists refer to the phases of the Earth's development as 'cenes', each leaving characteristic traces in rocks. Just as we use creatures trapped in amber or imprints of pterosaur skeletons to deduce what everyday life was like millions of years ago, certain items from the last eighty years will still be around in a million years' time. For example, in the middle of the last century, remnants of radioactive waste started to appear that didn't exist in any layer of rock before our time. If I want to know what I was like as a younger man, I rummage through the boxes in my basement and pull out postcards from Brazil. The best way to understand the time in which we now live is to think ahead. What items from our era will future geologists display in museums? Nespresso coffee pods? Car bodies instead of dinosaur skeletons? Vast numbers of bones, always from the same farm animal species, will have researchers puzzling over the meat-eating cult to which we sacrificed our future. Concrete, one of humanity's 'rock formations', will also be around forever. And never-ending mountains of plastic. Yes, we have already

made a lasting impression on our planet – and I mean ‘lasting’ quite literally.

Christian Schwägerl has inhaled the story of the Anthropocene. He was lucky enough to experience the late Nobel Laureate Paul Crutzen, spiritual father of the movement, and helped me to understand the concept through his articles on the German-language ‘RiffReporter’ platform: ‘Up to now, people entrenched themselves behind a formula that divided their actions by the billions of people in the world, deducing that their personal responsibility is minimal. In contrast, the formula for the future is to multiply one’s own lifestyle by eight, nine, ten billion and to see what the consequences would be.’

Could be a quote from Kant.

The word ‘Anthropocene’ was added to the Oxford Dictionary in 2014, the same year as ‘selfie’. How strong is the connection between our self-centredness and our destruction of the planet – and thus our basis of life? The notion of a new era means rethinking our role. Over thousands of years of human evolution, we have regarded ‘nature’ as ‘hostile’. We had to defend ourselves against its capriciousness, its superiority, its sheer might and scale. We named thunderstorms after gods to appease them. But we realised that the environment didn’t give us a second thought, and so we made provisions. When it turned cold, we draped ourselves in furs, started fires and told each other stories. We fought for survival with any means necessary – after all, we were weaker than our opponent. Things were certainly different in many indigenous cultures, more of an interaction, a cooperation; you asked an animal for forgiveness when you killed and ate it. But it was clear that there were still plenty of animals in the forest. And as the human population grew and grew, as the things we invented, built and plundered became ever more complex, we didn’t notice that the tables had turned and we had become a threat to nature.

Today, humans are the main species shaping life on Earth. In the mid-1970s, Lynn Margulis, a microbiologist, and James Lovelock, a chemist, biophysicist and medical practitioner, developed the Gaia hypothesis. It’s named after Gaia, the primordial goddess who personified the Earth in Greek mythology. The hypothesis states that Earth and its biosphere can be viewed as ONE living entity – it is only together that all organisms create the conditions both for life and for the evolution of more complex organisms. In microbiology studies, we had to take ‘swabs’ just like the throat swabs required for rapid coronavirus tests. We then smeared the wad of cotton on a petri dish and watched to see if anything grew. One bacterium became two, two became four, and so on. And if you looked away, the dish would soon be full. But bacteria only grow until they get a feedback signal. Either the dish is full or the nutrients in their ‘breeding ground’ are all gone. Or it’s too hot or cold to reproduce. At some point, they stop growing.

The Earth is our petri dish. It is limited; the ‘breeding ground’ won’t last forever. But who’s going to stop the human race from growing? Humans have no ‘natural’ enemies – apart from themselves. There has been nothing to significantly reduce the population since the last world war, and so we continue unchecked towards a situation in which dwindling resources (such as food, water and habitat) force us to attack one another and reduce our numbers ourselves. We haven’t grasped that the era of perpetual growth has long since passed. In the Anthropocene, every one of us is a ‘global player’, and it doesn’t matter whether we know it or want it. In an increasingly complex world, it makes less and less sense to point at others and declare THEM to be the guilty ones. Obviously the oil industry is ‘evil’, but who buys its products?

So the big question is, can we act a bit more wisely than the bacteria, or will we simply continue to blindly grow, ignoring all indications that we’re reaching the limits, until we bring ourselves to our knees and free the Anthropocene from humanity? Who knows, there might not be anyone left to name the next geological era.

S. 477-481 (Retten Frauen)

WILL WOMEN SAVE THE WORLD?

'There's only one way to win a fight against people with lots to lose – start a mass movement with all the people who have a lot to gain.' Naomi Klein

Mary Robinson, the first female President of Ireland, surprised people when she made a statement that was much more than a play on words: 'Climate change is a man-made problem with a feminist solution.' 'Man-made' can denote something 'made by a man' and something 'made by humans'. After all, the modern interpretation of 'feminism' means equality for all people, regardless of their gender.

Women's education is one of, if not the most effective measure for maintaining a habitable planet. And that isn't just an old, white man throwing out his private opinion to ingratiate himself with his readers. At the German Sustainability Award ceremony, Katharine Wilkinson told me that women are the world's most important farmers, producing 60 to 80 percent of food in poor regions. 'Women are significantly more efficient than men. If women were elevated to the same status as men in matters of money, loans, education, devices and technology, we could expect agricultural productivity to rise by 20 to 30 percent and fewer people would go hungry.' According to her calculations, greater equality within agriculture could also prevent 2 billion tons of exhaust gas emissions between now and 2050, the same reduction that would be achieved through consistent global recycling.

According to UNESCO, by 2050, providing girls with a solid education could lead to a reduction in greenhouse gas emissions of over 50 gigatons. Why? Katharine explains: 'Well-educated women are guaranteed to have a higher income and experience less poverty. They are no longer solely dependent on their husbands. This is crucial, because these women marry later and have fewer children. With just a few million, we could enable women around the world to access contraception.'

Even today, 650 million girls and young women are forced into marriages before their 18th birthday – which also ruins their prospects of an education and a career. Menstruation can also create gaps in a girl's education. It causes around 20 percent of girls in India to drop out of the school system, while in Malawi, 70 percent of girls miss several days of school every month. This is a simple problem to solve – solutions include the Ruby Cup, which is reusable, made from medical grade silicone and lasts for ten years. It would also save tons of rubbish. When you buy a Ruby Cup, you can donate a second to help a girl in another country attend school every day.

Right now, CO2 emissions per person are rising faster than the global population. I'm aware that the world's population, resource consumption and birth control is an incredibly complex topic. Who's the 'excess' in 'excess of population'? Who shouldn't be allowed to live, and who makes that decision? If women could use contraception as they wished and received good medical and social care, the global maternal mortality rate would drop by 73 percent, while infant mortality would decrease by 80 percent. In Mali, women with a secondary education have three children on average; women without an education have seven. So a woman's health and number of children correlate with her education. Many experts work on the assumption that the world's population could begin to shrink around 2060. A reason for optimism.

Rather than hoping for technical innovations, those of us living in rich countries should focus far more on ensuring that schools are built in areas where there are not enough, and that gender equality is afforded the importance it deserves. Education is the most humane way to reduce the number of people on Earth to a sustainable level in the long term. Far more humane than wars, hunger and thirst. It might sound paradoxical at first, but the more children we allow to die in the short term, the more children there will be in the long term. Are developing countries too slow to develop? A quick fact check: What our latitudes took over a hundred years to achieve, Bangladesh managed in 45 years, less than half the time.

The climate crisis is also a leadership crisis. Women take fewer incalculable risks. There is evidence that



environmental protection is taken more seriously in parliaments with more female representatives. As things currently stand, democracies with women at the top – such as Germany, Finland and New Zealand – have dealt better with the coronavirus pandemic than countries led by macho men (like Great Britain, the USA, Russia, Brazil and Turkey). In the environmental movement, both internationally and within Germany, I can think of many strong women spanning three generations: Greta Thunberg, Luisa Neubauer, Christiana Figueres, Mary Robinson, Jane Goodall, ranging in age from twenty to eighty. ‘Fridays for Future’, currently the biggest climate movement, is headed mainly by women. Coincidence?

Over time, I have come to realise just how underrepresented women are not only in the upper echelons of hospital management, but also in governments, business, UN negotiations, and so on – and we are all suffering the consequences. The climate crisis isn’t just a physical problem. Women tend to be aware that human rights, welfare, family planning and questions of power are inextricably linked. The declaration on the ‘Women Lead Climate’ website has over a thousand signatures, including Jane Fonda, Naomi Klein, Christiana Figueres, Gro Harlem Brundtland, Kumi Naidoo and Sibylle Szaggars-Redford, the multimedia environmental artist.

And, one line below, her husband Robert.