

Piece for Transformations on Lovelock's new book *The Vanishing Face of Gaia*.

By Mark Brayne, May 2009 ©

James Lovelock is not the Green movement's favourite scientist.

With his Gaia thesis first articulated 40 years ago, he may have been the first to explain how our planet's atmosphere, land, oceans and life are profoundly interconnected. Very green. But then Jim sinned.

In the twilight of his career (he's now a spritely 89, hoping to fly in space with Richard Branson late this year and go on to reach 100), Lovelock endorsed nuclear power and began campaigning against wind energy too.

Above all, he has taken to warning that mankind has already passed the tipping point of what he bluntly calls global heating (no more the cosy "warming"), and that most of the Green movement's passions are no longer relevant.

To environmentalists committed to Alternative Energy and Transition Towns, to Human Rights and Individual Freedoms, to Recycling and Saving the Planet, that's defeatist heresy. But the problem with dismissing Lovelock as an embittered old man, as many Greens seem to, is that to judge by everything that has actually happened in our observed environment since he set out his Gaia theory in the late 1960s, he is right.

I certainly believe he is. And indeed, putting together the science, the sociology, the psychology and everything I personally read, know and observe, I for my part have become grimly certain that Lovelock if anything understates the implications, as humanity heads into catastrophic collapse of everything we currently take for granted. As I see it, only the timeframe is uncertain. Twenty years? Maybe not that soon. 100 years? At the very latest.

Surprisingly perhaps for those who can't forgive Lovelock for his embrace of nuclear power, his very readable and engaging new book *The Vanishing Face of Gaia* is paradoxically kind and even gentle in its evocation of the beauty and resilience of our Earth, and of hope for what might emerge from the meltdown which we now face.

But before we can be gentle and hopeful, we need to be very clear on a couple of facts. And if the facts of climate change make you seriously uncomfortable, perhaps you'd better not read any further.

Fact one. As Lovelock and the overwhelming majority of the world's scientists now understand it, is that if human civilisation and population are to survive in anything like their present form (in my understanding, already impossible), we must radically reduce our output of greenhouse gases. Immediately.

NASA's respected Jim Hansen has identified 350 parts per million (ppm) of CO2 equivalent in the atmosphere as the maximum that Gaia can handle without the environment heating beyond the point of no return for most of its current life forms.

So where is CO2 now? Already 375 ppm and rising. Beyond the tipping point, although in Hansen's optimistic view not necessarily yet beyond the point of no return. And despite 12 years of Kyoto and all the gathering politics of climate change, which way are CO2 levels heading? Relentlessly upwards, at an accelerating pace.

So let's be honest. Even if we still had time – and Lovelock concluded some five years ago that it was already too late – significant reductions in CO2 levels just aren't going to happen fast enough. Politically, psychologically, economically. It's just not doable. Indeed, a very inconvenient truth.

Fact two. As Lovelock makes plain, it isn't just CO2 and the rising sea levels, drought and heat that are already locked into the Earth's systems. It's also what the UK government's chief scientific adviser John Beddington recently called a "Perfect Storm" of disappearing water, food and energy resources, gathering even without climate change to major global crisis by 2020.

It's not really just about fossil fuels. The issue is that there are, quite simply, too many of us. The planet will very soon just not be able to sustain a human population of nearly seven, soon rising to eight or nine billion people.

So, within THIS century – that is, in the lifetime of our children and grandchildren - Lovelock is no longer alone in predicting that there will be a cull of human beings on a scale never before seen, with, by 2100, perhaps one billion survivors or fewer.

Read that again.

And just imagine, if you can, how that will happen. It will mean the implosion – beginning very possibly in your lifetime and mine - of communities, of cities, of the global economy, of agriculture, of industry, of power generation, of food distribution and transport. It will mean death on a barely imaginable scale, conflict and anarchy. Not just out there, but here too.

Fact three. The climate change that triggers that collapse won't be gradual. It will be, as Lovelock and the scientists describe it, "non-linear."

In the next few years, Lovelock predicts, we'll see increasing turbulence in the weather, as temperatures steadily approach two degrees above the average for the past hundred thousand years.

Then, basing his predictions on almost universal scientific consensus around geological and ice-core evidence of past climate shifts, on increasingly sophisticated computer modelling, and on the changes, more rapid than even the previous worst-case scenarios, which we're now actually observing in, for example, the melting of the Siberian and Canadian permafrosts and of the polar ice caps, Lovelock foresees a sudden jump in temperature to some five to six degrees above the level that has allowed mankind to flourish on this planet.

For most current life on this Earth, that is not survivable. These are temperatures which will melt almost all the world's remaining ice, dry out most major rivers, set fire to the Amazon rain forests,

lift sea levels by several metres, and turn most of the planet's oceans and landmass into uninhabitable desert.

There will probably be, at least in the transition, what Lovelock now calls "lifeboat" nations such as our own British Isles, and also Japan, Taiwan and New Zealand, and possibly areas of northern Russia and Canada where temperatures remain moderate and where life and agriculture can continue. But as the Indian sub-continent, northern China and much of Africa dry out, just imagine the pressures of billions of climate refugees on the move, clamouring to get aboard.

Again - it needs to be named - very probably in our own lifetimes.

These aren't wild scenarios. These are firm scientific predictions, based on hard evidence, for what will happen if (when) the Earth heats by five degrees or more.

As a relative newcomer to Green politics, and as a former BBC foreign correspondent-turned-Cotswold-based-psychotherapist, as a passionate cyclist but also as Aga-owner, I find it both bewildering but also I suppose logical how hard many Greens find it to listen to Lovelock.

After all, unlike me, most older readers of this journal have been actively campaigning for decades for a change of human heart towards the environment and for sustainable development.

Your work has made a difference. But nothing like enough. You know that dire warnings of nuclear apocalypse during the Cold War, or of the death of rain forests through acid rain, or the frying of the planet as ozone holes open, have all failed to persuade a public grown tired of being told that The End is Nigh. (Aesop got it right with his parable of the boy who cried wolf – these are attitudes that are hard-wired into the human psyche.)

So, the Greens – and the many politicians, scientists and activists who do understand how urgent this is – have all chosen for the past few years to sweeten the pill of doom with messages of we-can-crack-this-if-we-all-pull-together.

The problem with that approach is that what most ordinary consumers hear is not that it's desperately urgent, but that if they recycle their rubbish, buy a Toyota Prius, turn down the central heating a bit and perhaps take the bus to work instead of the car, all will be fine. The alternative message, namely the truth, is just too hard to hear.

It's classic psychological denial, like a terminally ill patient who quite literally cannot take on board that he's dying. Indeed, as I write these lines, my 87-year-old father has only weeks to live. He has lung cancer, and will be dead by the time you read this. The doctors and the carers know it. We as his relatives all know it. But even though he's been told several times that the cancer is back, my rapidly weakening father at an unconscious level chooses and needs to keep telling himself that the cancer treatment was successful.

He's only one individual, and of course, we can at least accept if not collude with his belief, and not hammer home the message.

But let's stretch the metaphor. What if the survival of our entire family, our very species, depended on my father accepting that he's dying, and on his working with all of us around his bedside to

prepare for his and our own death? I suspect we would and should be rather less relaxed about allowing him to stay in denial.

And, let's not beat about the bush. As Lovelock reminds us, humankind remains in denial. We may be talking more openly of climate change and sustainability. But as individuals or as groups or nations, we are neither ready to make the radical changes in behaviour and lifestyle that might arrest our plunge towards catastrophe, nor yet to face what it will mean to carry on with business as usual.

In our billions, we continue for the most part to drive, to fly, to shop, to moan, to live and to love with our eyes focused on the present and the immediately identifiable future. In varying forms at different times in our evolution, that's what we as humans do - until and unless we actually fear for our survival.

And that's perhaps why, despite being frustrated, desperate, confused, paralysed as to what actually to do, I did not close Lovelock's gentle and even beautiful book with despair, but rather with hope.

Homo sapiens is approaching an alcoholic's tipping point when he ceases to deny, or to be able to deny, his addiction – the first and essential step towards any hope of survival. Once that shift has happened –and it will, probably quite soon and certainly very painfully – Lovelock helps us to understand the preparation that is to be done so that the knowledge and values of our species are not lost in the meltdown that is coming.

And yes, although it's a relatively small point in this alarming narrative, Lovelock is in my view right in arguing that basic survival will involve the transitional use of nuclear energy. For without electricity – and much more of it than can be generated by wind or water In the time we have left – our civilisation will disappear.

It's a blunt assessment, a message leaders and electorates need to hear. But what's also refreshing about this new book, as indeed about all of Lovelock's clear and courageous writings, is the absence of sackcloth and ashes.

There's no point, Lovelock says, in us as modern man blaming ourselves for how we have become the feverish Earth's infection. We are part of Gaia, a force of nature, and the seeds of the changes now taking place were most probably sown hundreds of thousands of years ago when we first discovered fire, and began clearing land for farming, and began cooking food to kill off the bacteria and germs that would otherwise have kept our numbers in sustainable check.

By virtue of our extraordinary creative intelligence, says Lovelock, we've become the planet's toughest predator. We cannot alter our natures. But we can try to temper our strength with decency – and hope to evolve beyond the coming cull into an intelligence in harmony with what he calls a truly sentient planet.

"Thinking this way," Lovelock continues, "how could anyone be a pessimist and imagine that the global heating crisis is the end for us or even Gaia. We will probably both survive and from our descendents could evolve the wiser species that could live even closer in Gaia and perhaps make her the first citizen of our Galaxy."

But that vision won't be possible if through inaction or an improper response we allow ourselves to become extinct.

That's how serious it is, and although Lovelock phrases it with kindness and gentleness, it's a call for urgent action and leadership which we must surely all find ways of echoing, loudly, from the rooftops.