

Apolcalypse shortly: Tony Lowes reviews *'The Uninhabitable Earth, A Story of the Future'* by David Wallace-Wells (Google eBooks \$5.99)

"Someday, perhaps not long from now, the inhabitants of a hotter, more dangerous and biologically diminished planet than the one on which I lived may wonder what you and I were thinking, or whether we thought at all"
— John Steinbeck

"We all lived for money, and that is what we died for"
— William Vollmann

"The future is already here, it just isn't evenly distributed"
— William Gibson

"It is worse, much worse, than you think". So begins a tour de force of our climate change story in all its harrowing manifestations.

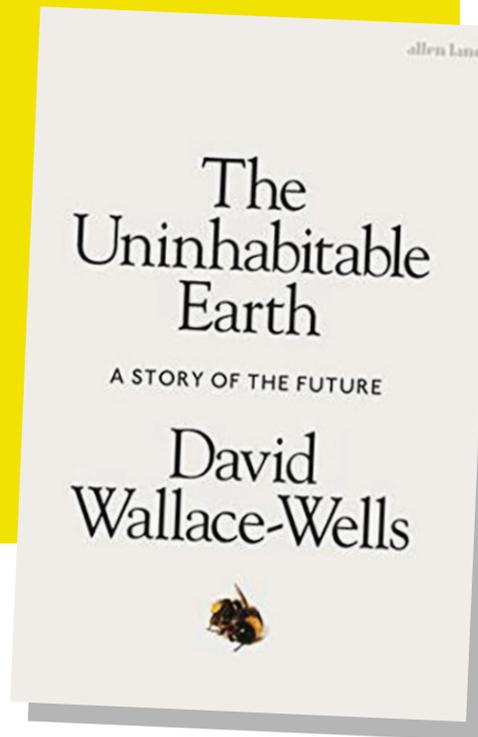
David Wallace-Wells' encyclopaedic inventory marshals the horror story that "ignorance and indifference" have hidden from us. "This is not a book about the science of warming", he writes: "it is about what warming means to the way we live on this planet".

But at its heart it is about us: a 'known unknown'. Because the future of our civilisation hangs on the actions we take.

Many know the catalogue of the deaf ear: Fourier, 1824; Tyndall, 1861; Arrhenius, 1896; Keeling, 1958; Broecker, 1975; Hanson, 1988; Gore, 2014. We can add Wallace-Wells' 2020 book, based on his cover story in *New York* magazine, the most-read story the magazine has ever published – reviewed as "this generation's 'Silent Spring'" by the *Washington Post*.

"Since 1980, the planet has experienced a fifty-fold increase in the number of dangerous heat waves; in the heat, roads in cities melt and train tracks buckle. The deadly European heat wave of 2003, which killed as many as 2,000 people a day, killed 35,000 Europeans, the direct-heat effects compounded by broken public health infrastructure".

"At two degrees, there would be thirty-two times as many extreme heat waves in India, and each would last five times as long, exposing ninety-three times more people. This is our best-case scenario".



"Heat death is among the cruellest punishments to a human body. First comes 'heat exhaustion', mostly a mark of dehydration: profuse sweating, nausea, headache. After a certain point, though, water won't help, your core temperature rising as your body sends blood outward to the skin, hoping desperately to cool it down. The skin often reddens; internal organs begin to fail. Eventually you could stop sweating. The brain, too, stops working properly, and sometimes, after a period of agitation and combativeness, the episode is punctuated with a lethal heart attack".

And in the two years since the book's release? Fires rampage in Australia, California and Russia all break records. Droughts recur. Unprecedented floods deluge Germany and South Africa. Melting permafrost fractures Arctic oil pipelines. Freak Texas cold snap cripples State's electricity grid. Hurricane hits Haiti two days after its devastating 2021 earthquake.

"A cascading violence, waterfalls and avalanches of devastation, the planet pummelled again and again, with increasing intensity and in ways that build on each other and undermine our ability to respond".

The shibboleths fall. The science of climate

modelling moves fast, powered by astonishing advances in meteorology and computer power.

"A decade ago, climatologists might have told you that although direct heat undermined plant growth, the extra carbon in the atmosphere would have the opposite effect – a kind of airborne fertiliser".

In fact "thicker leaves are worse at absorbing CO₂, an effect that means, by the end of the century, as much as 6.39 billion additional tons CO₂ in the atmosphere each year".

'Iconoclastic' mathematician, Irakli Loladze, showed in 'The Great Nutrient Collapse' that even the protein content of bee pollen has dropped by a third.

The Devil's bargain. Eric Holthaus' term depicts the choice between public-health measures destroying airborne pollution and a dramatic spike in global warming.

A January 2018 paper explained: "Removing aerosols [pollution] induces a global mean surface heating of 0.5-1.1°C, and precipitation increase of 2.0 – 4.6%".

So if we clean the world's air the Paris Agreement's 1.5°C target will need to become 2°C-2.6°C. And the 2°C degrees prescription ('to limit the global temperature increase in this century') would become 2.5°C – 3.1°C.

The known unknown. How humans will respond is the one factor that we cannot model.

A literature of choices has arisen.

From David Beckel's self-immolation in Brooklyn's Prospect Park in 2018 (shades of the Vietnamese war) to Geoff Mann and Joel Wainwright's 'Climate Leviathan: A Political Theory of Our Planetary Future' (a call to arms for planetary sovereignty); through Harald Welzer's 'Climate Wars' ('what people will be killed for in the 21st century'); to Andreas Malm's 'The Progress of this Storm' (his follow on from 'Fossil Capital'); to James Scott's 'Two Cheers for Anarchism' (self-explanatory); all the way through Adam Frank's 'Light of the Star' (astrobiology of the Anthropocene

Climate apathy and indifference can be eco-nihilism. But they can also be the "repurposing of ascetic traditions, stretching from the young Buddha through the pillar saints".

And the future does not end at 2100 just because most climate modelling, by convention, sunsets at 2100. The author shares some of his colleague's description of what is to come: the hundred years that follow they call the "century of hell".

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