

Environmental *Change* Institute



Energy abundance: Powerful vision for a better future or a flawed fantasy?

Dr Tina Fawcett

Environmental Change Institute, University of Oxford

4 Nov 25



Outline

Introduction to 'Abundance'

Key ideas in Abundance

General critiques of the book

Their energy vision

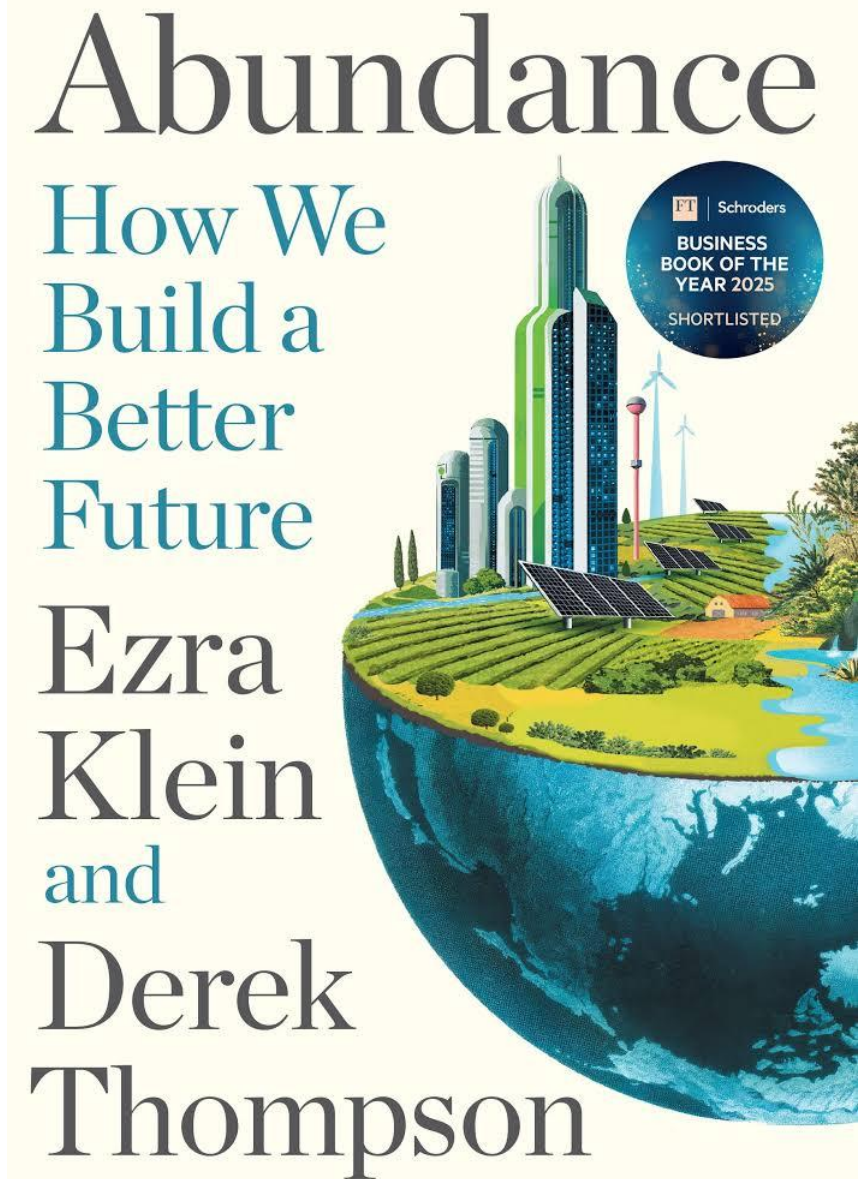
Alternative visions of energy futures

Concluding remarks



“This book is dedicated to a simple idea: to have the future we want, we need to build and invent more of what we need. That’s it. That’s the thesis.”
(p4)

“Abundance contains within it a bigness that befits the American project. It is the promise of not just more, but more of what matters.” (p222)



Bestselling authors of *Why We're Polarized* and *Hit Makers*

Their vision for 2050 (1)

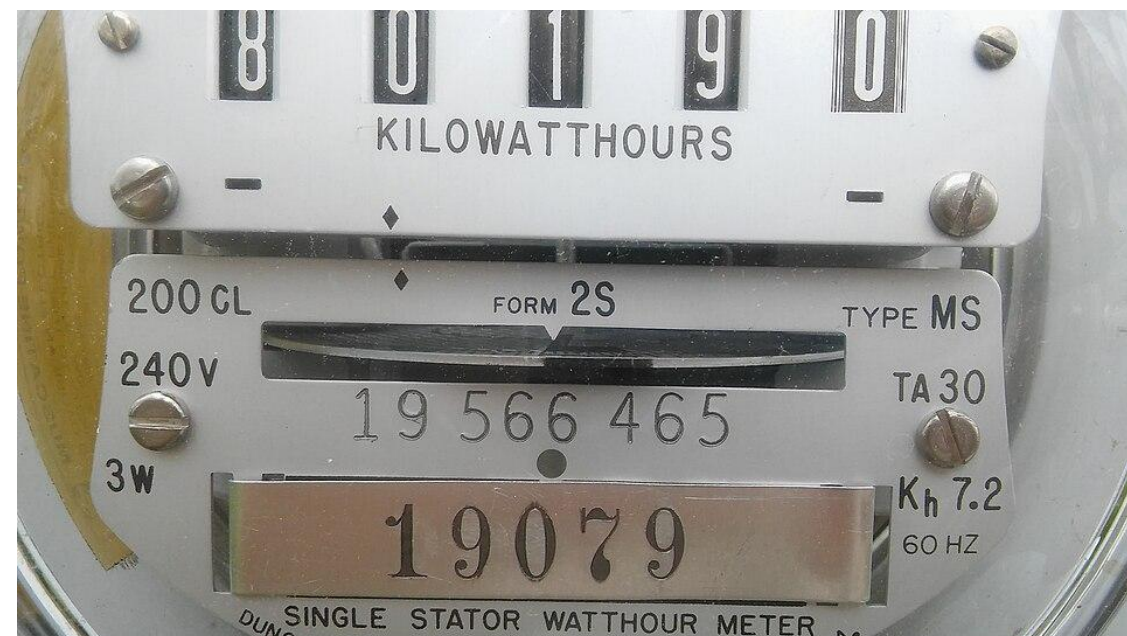
“A few feet above your head, affixed to the top of the roof, a layer of solar panels blinks in the morning sun. Their power mixes with electricity pulled from several clean energy sources – towering wind turbines to the east, small nuclear power plants to the north, deep geothermal wells to the south. Forty years ago, your parents cooled their bedrooms with joules dredged out of coal mines and oil pits. ... Today that seems barbaric. You live in a cocoon of energy so clean it barely leaves a carbon trace and so cheap you can scarcely find it on your monthly bill.” (p1)

Too cheap to meter: A phrase with history

In 1954, Lewis Strauss, chairman of the former United States Atomic Energy Commission, famously described nuclear electricity as likely to be 'too cheap to meter'.

However, he was speaking for himself, not his organisation. The electric power industry was not happy with their new catchphrase. Industry officials distanced themselves from Strauss's speech.

Donald Hintz, Chairman of the Nuclear Energy Institute, said in 2003 that the nuclear industry had been "plagued since the early days by the unfortunate quote: 'Too cheap to meter'." Those four words had become a standard catchphrase for what critics claim were impossibly sunny promises of nuclear power's potential.



<https://www.nrc.gov/reading-rm/basic-ref/students/history-101/too-cheap-to-meter>

<https://cnduk.org/resources/nuclear-power-in-the-uk/>

Image: [CC-BY-SA-4.0](#)

Their vision for 2050 (2)

“Outside, the air is clean and humming with the purr of electric machines all around you. Electric cars and trucks glide down the road, quiet as a light breeze and mostly self-driving. Children and adult commuters follow on electric bikes and scooters... Another last-mile delivery drowns descends...like a hummingbird and drops off a package.” (p3)

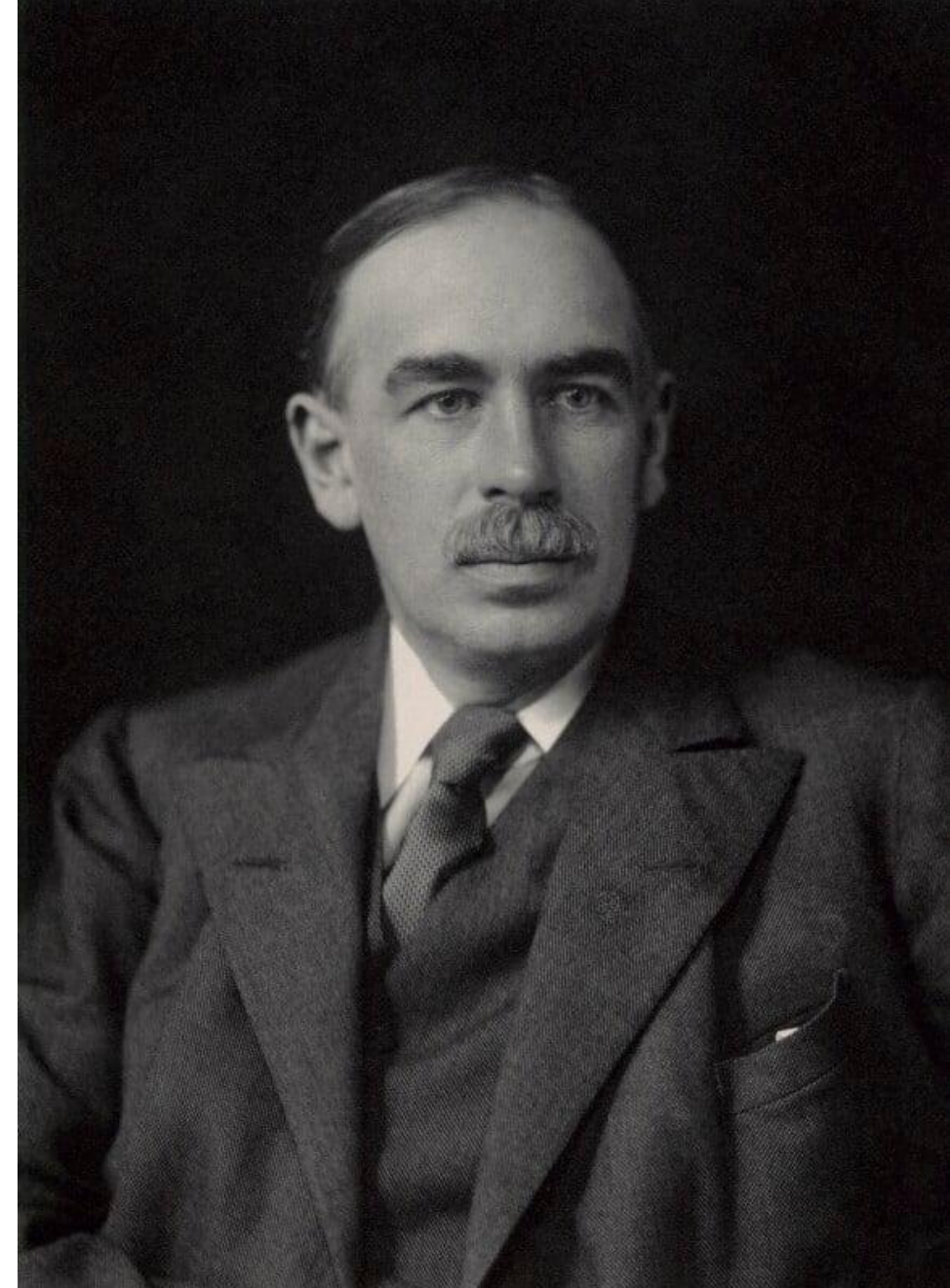
“Thanks to higher productivity from AI, most people can complete what used to be a full week of work in a few days.... Less work has not meant less pay.” (p3)

John Maynard Keynes envisages a 15-hour working week by 2030

Back in 1930, the eminent economist J M Keynes predicted that by 2030 the working week would be drastically cut, to perhaps 15 hours a week, with people choosing to have far more leisure as their material needs were satisfied.

“I draw the conclusion that, assuming no important wars and no important increase in population, the economic problem may be solved, or be at least within sight of solution, within a hundred years.” (Keynes, 1930)

John Maynard Keynes, Baron Keynes
by Walter Stoneman, National Portrait Gallery
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Themes in 'Abundance'

- The book examines the reasons behind the lack of progress on ambitious projects in the United States, including those related to affordable housing, infrastructure, and climate change.
- Identification of blockages to growth, case study examples
- Growth as the solution: characterises degrowth ideas as 'rapid, collective scarcity'
- Taking invention more seriously
- Analysis based on insights from economics, politics, 'culture'
- Rethinking American politics, cites destructive divergence between Republicans and Democrats as part of the problem
- To be successful again, liberalism needs to become a political movement "that builds"

Review of the book (1)

Every political movement has an image of the past that motivates its view of the future. ... For Ezra Klein and Derek Thompson, it is the techno-optimism of the 1964 New York World's Fair "Futurama" exhibit: a vision of commuter flights to the moon, desalinisation turning deserts into farmland, hotels on the ocean floor.

In their book, *Abundance*, they argue for a new politics that unlocks the potential of the remarkable technologies that already exist, as well as those yet to be invented.Like *Futurama*,

Abundance is a utopian project. In order to show what could be, it conceals the hard parts."

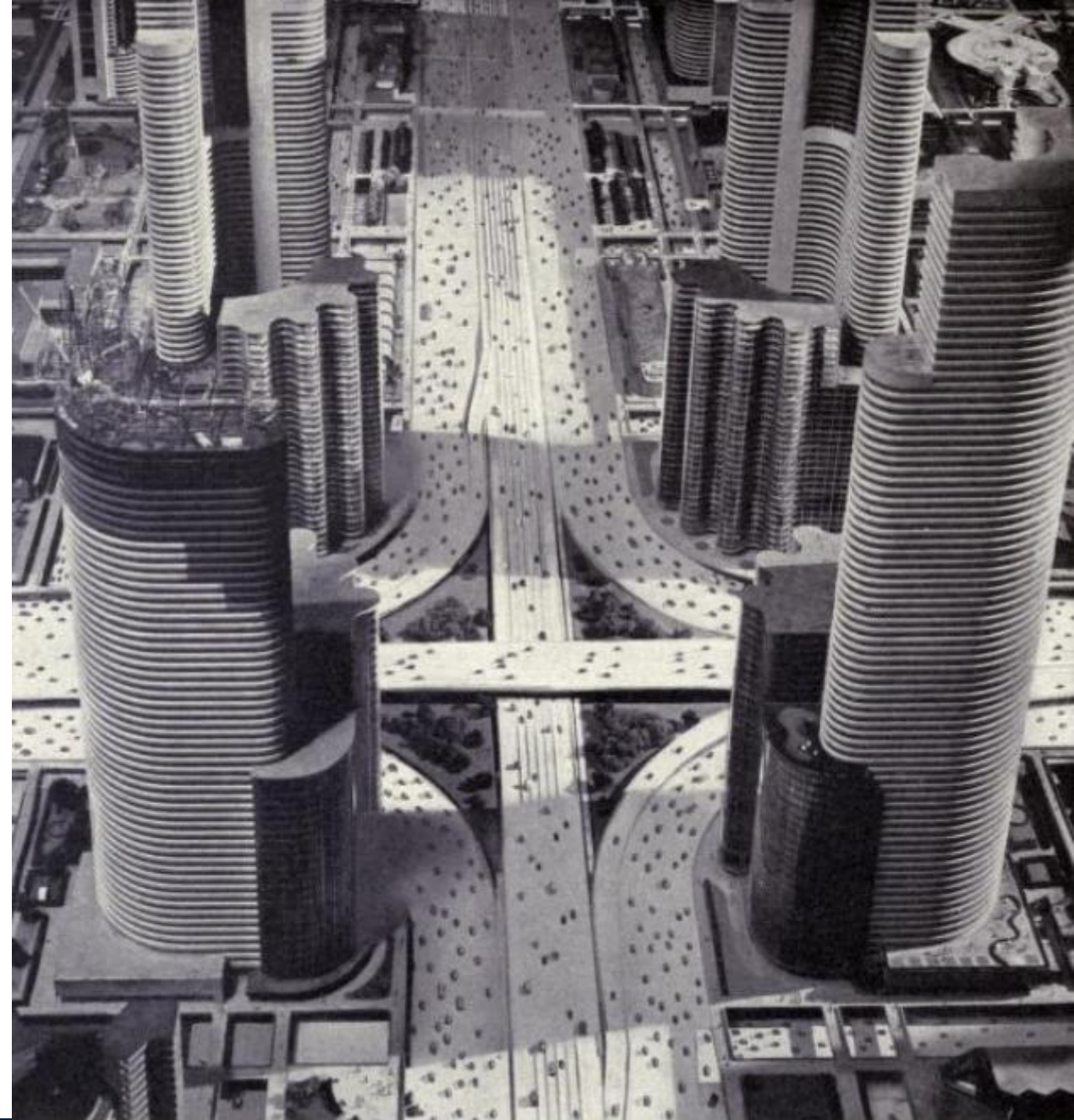
Review by Noah Kazis, *The Guardian*, 27 March 2025



1939 & 1964 Futurama

Futurama was an exhibit and ride at the 1939 New York World's Fair designed by Norman Bel Geddes, which presented a possible model of the world 20 years into the future (1959–1960). The installation was sponsored by the General Motors Corporation and was characterized by automated highways and vast suburbs.

The General Motors pavilion at the 1964 New York World's Fair included a ride, **Futurama II**, that was also known as "The New Futurama". (Reference: Wikipedia)



“Abundance” Is Not the Answer

Christopher F. Jones disagrees with large portions of Ezra Klein and Derek Thompson’s “Abundance”—in particular, the notion that we can “build” ourselves out of our national problems using technology.

“Klein and Thompson echo the claims of ecomodernists who believe that we can solve all our environmental problems through technological innovation and economic growth. Dubbed solutionists, ecomodernists assume a world of infinite renewable energy, which means we can have it all—abundant food, medicine, travel, and wildlife. This Pollyannaish vision ignores the messy realities on the ground, such as the massive environmental costs that accrue from mining, manufacturing, and disposing of the materials necessary for generating so-called clean energy. It’s an unrealistic vision that fails to engage with hard choices.”

The Real Path to Abundance

To deliver plentiful housing and clean energy, we have to get the story right about what's standing in the way.

Sandeep Vaheesan

BOSTON 50 REVIEW

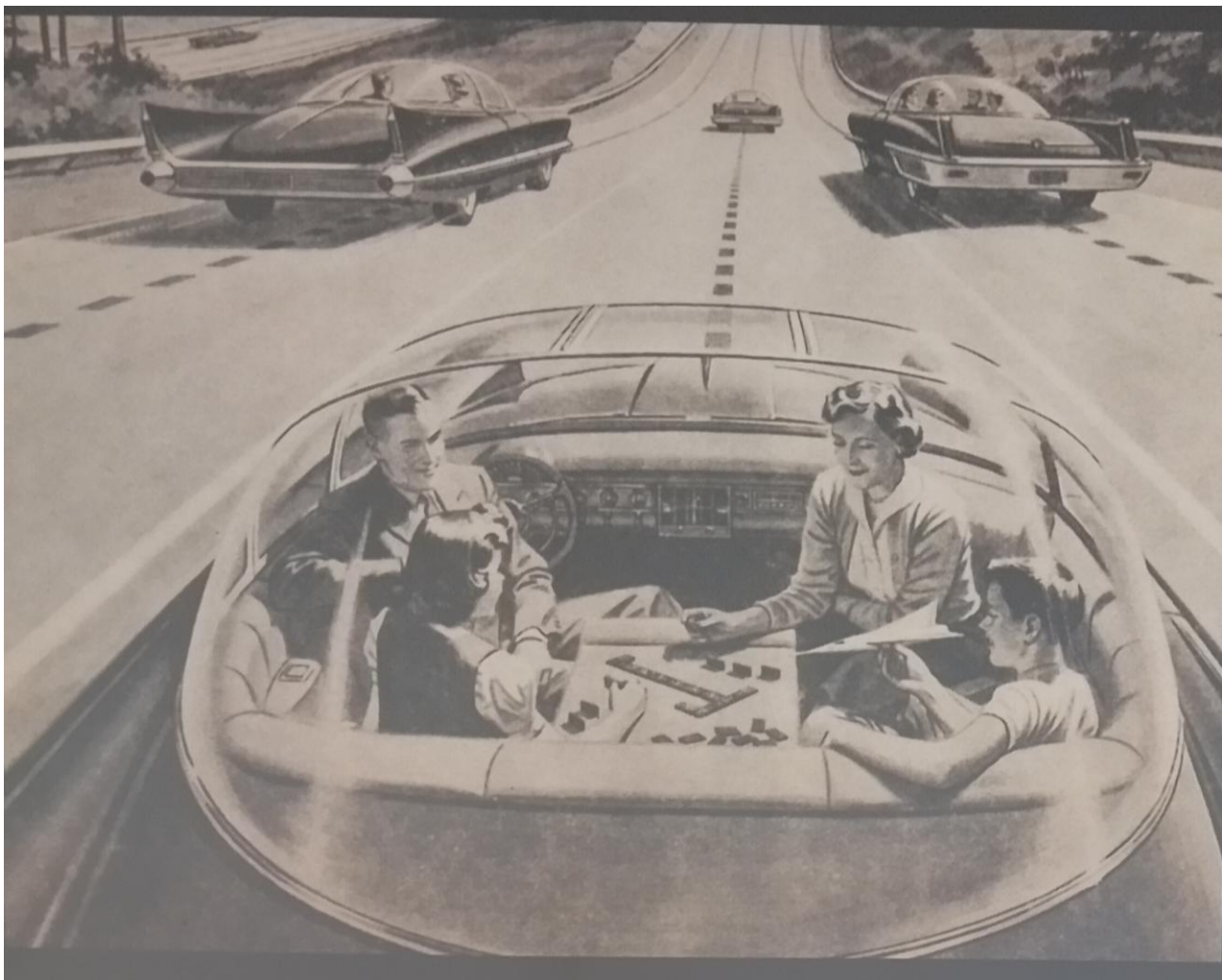
“The book echoes today’s oligarchy in another way, too: its embrace of Silicon Valley’s vision for America. Klein and Thompson gush about AI’s potential and want the United States to play a leading role in directing its development. Similarly, their transportation future says more about self-driving electric vehicles than about mass public transit. This is... the familiar futurism of tech oligarchs.”

- <https://www.bostonreview.net/articles/the-real-path-to-abundance/>



<https://nextnature.org/en/museum/retrofuture>

Self-driving cars as imagined in 1957

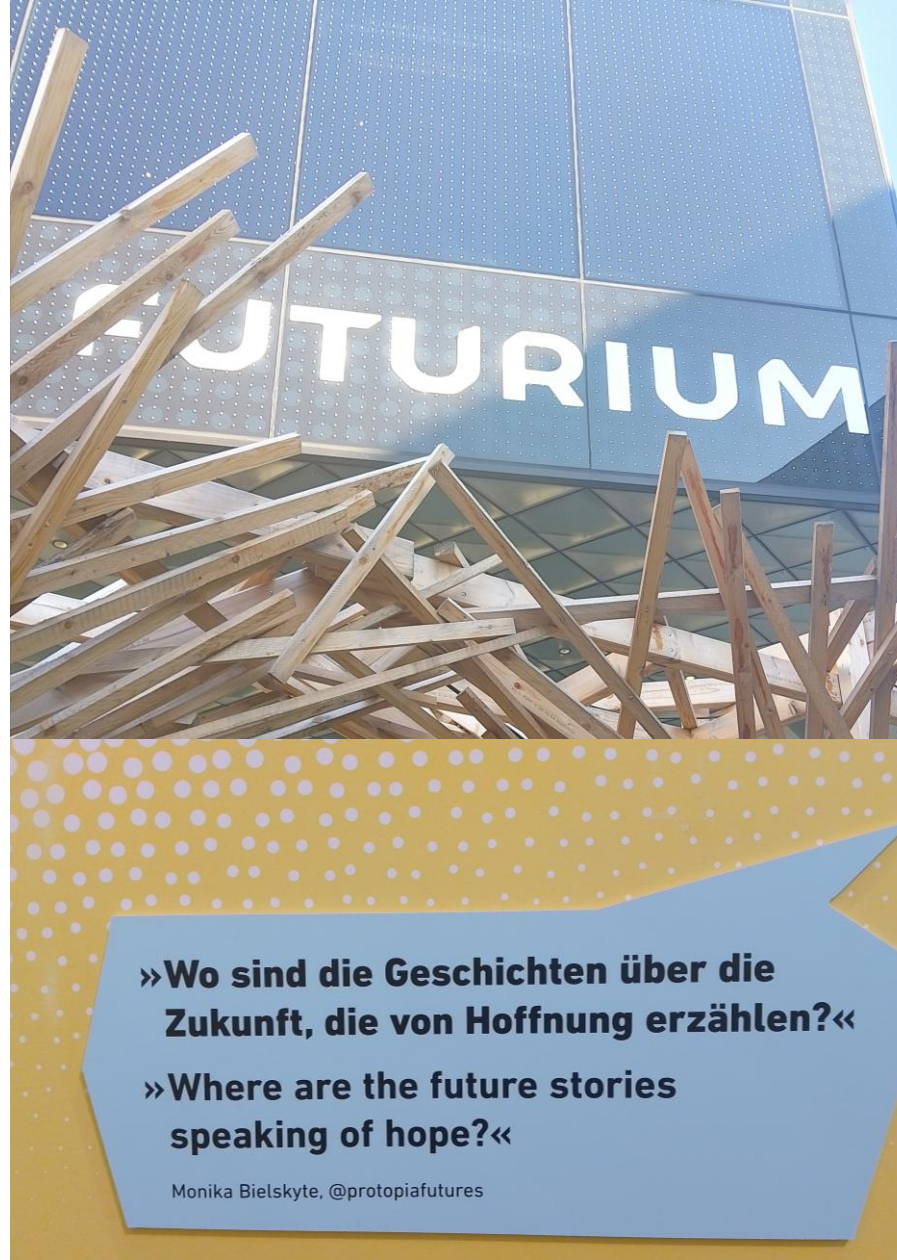


Zelfrijdende auto, Illustratie door Americas Electric Light & Power Companies, US, 1957: De zelfrijdende auto is al heel lang een wens van elke autofabrikant en de meeste weggebruikers. Deze auto heeft nog wel een stuur, maar er is volop ruimte voor vermaak onderweg. Vooralsnog is het nog geen enkele autofabrikant gelukt om een auto volledig zelfsturend te maken. Zal het ooit lukken?

Self-driving car, Illustration by Americas Electric Light & Power Companies, US, 1957: Every car manufacturer and most road users have been dreaming of the self-driving car for many years. This car still has a steering wheel, but there is plenty of room for entertainment while on the road. As yet, no car manufacturer has succeeded in making a fully self-driving car. Will it ever happen?

Here in the
Futurium,
everything
revolves
around the
question:
how do we
want to live?

<https://futurium.de/en>



»Wo sind die Geschichten über die
Zukunft, die von Hoffnung erzählen?«

»Where are the future stories
speaking of hope?«

Monika Bielskyte, @protopiafutures



The Abundance energy vision

Electrify everything

Zero carbon electricity supply to come from nuclear and renewables

“By some counts, nuclear power is safer than wind and cleaner than solar.” (p15)

Massively increase supply of renewable electricity

“We say that we want to save the planet from climate change. But in practice, many Americans are dead set against the clear energy revolution, with even liberal states shutting down zero-carbon nuclear plants and protesting solar power projects.” (p4)

Decarbonisation will require new technologies: clean jet fuel, low carbon cement, carbon removal from the atmosphere

The energy transition away from fossil fuels: a (more or less) consensus view from the UK

1. Reduce demand for energy
2. Shift to using electricity for most purposes
3. Supply electricity from non-fossil fuel sources, mostly renewables
 - Enable flexibility of use
 - Increase energy storage at all time-scales, particularly seasonal
4. CCS for remaining fossil fuels

Plus policy, social, governance & institutional change needed to make all this possible.

What are the important differences?

No mention of demand side, energy saving or energy efficiency anywhere in the book (not in the index).

Very asymmetric understanding of what is needed for the energy transition.

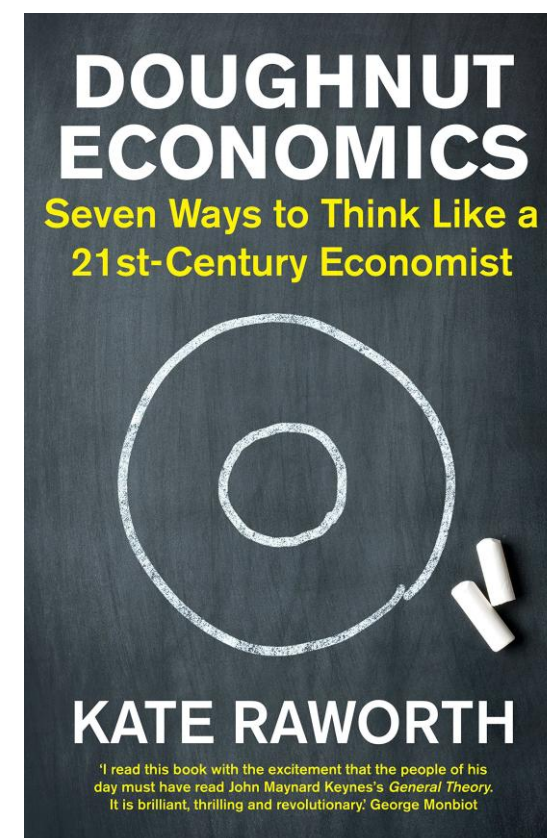
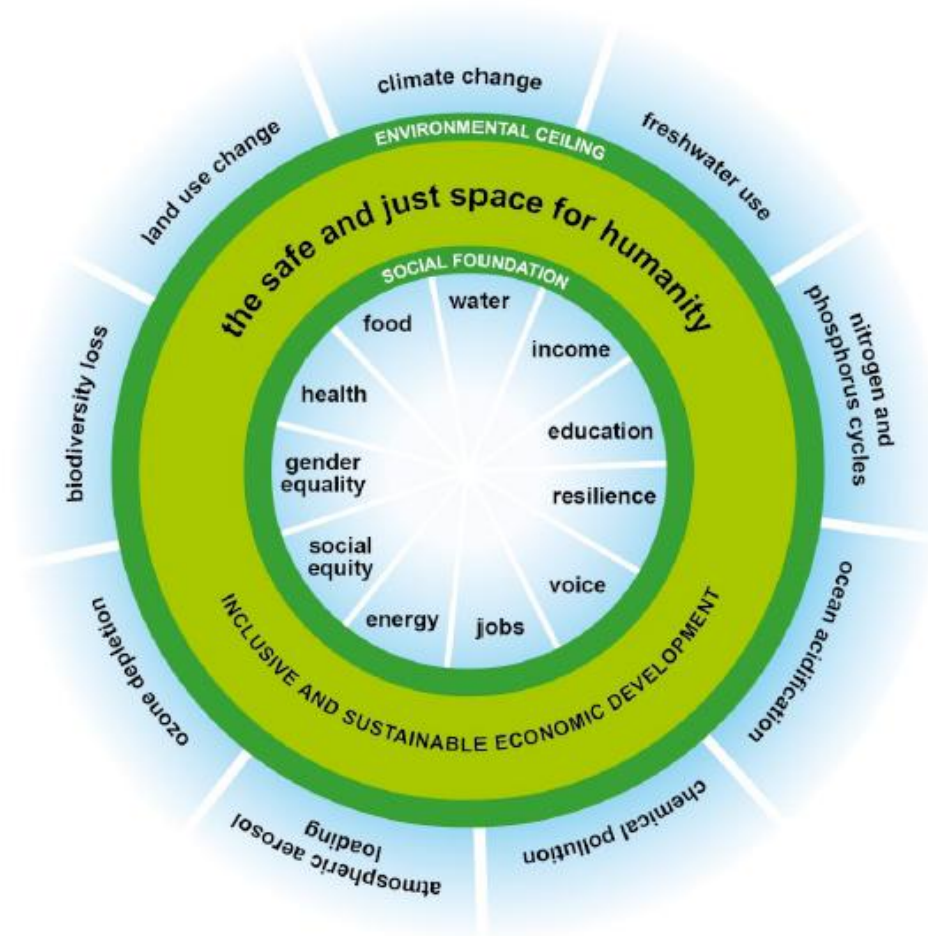
Energy from renewables – ignores the physical infrastructure needed to turn it into useful energy for modern societies & the environmental costs involved

(Notably their vision doesn't extend to other forms of energy – not imagining fossil fuel + CCS or biomass abundance.)

But it is a powerful story.

Imagining different (energy) futures

The sustainable development 'doughnut': a framework including sufficiency and justice



A working definition of energy sufficiency

Energy sufficiency is a state in which people's basic needs for energy services are met equitably and ecological limits are respected

+

Energy sufficiency is an organising principle for achieving that state

(Darby & Fawcett, 2018)

“

A masterpiece... *Less Is More* covers centuries and continents, spans academic disciplines, and connects contemporary and ancient events in a way which cannot be put down until it's finished. So much needs to change; although beginning that change might...

”

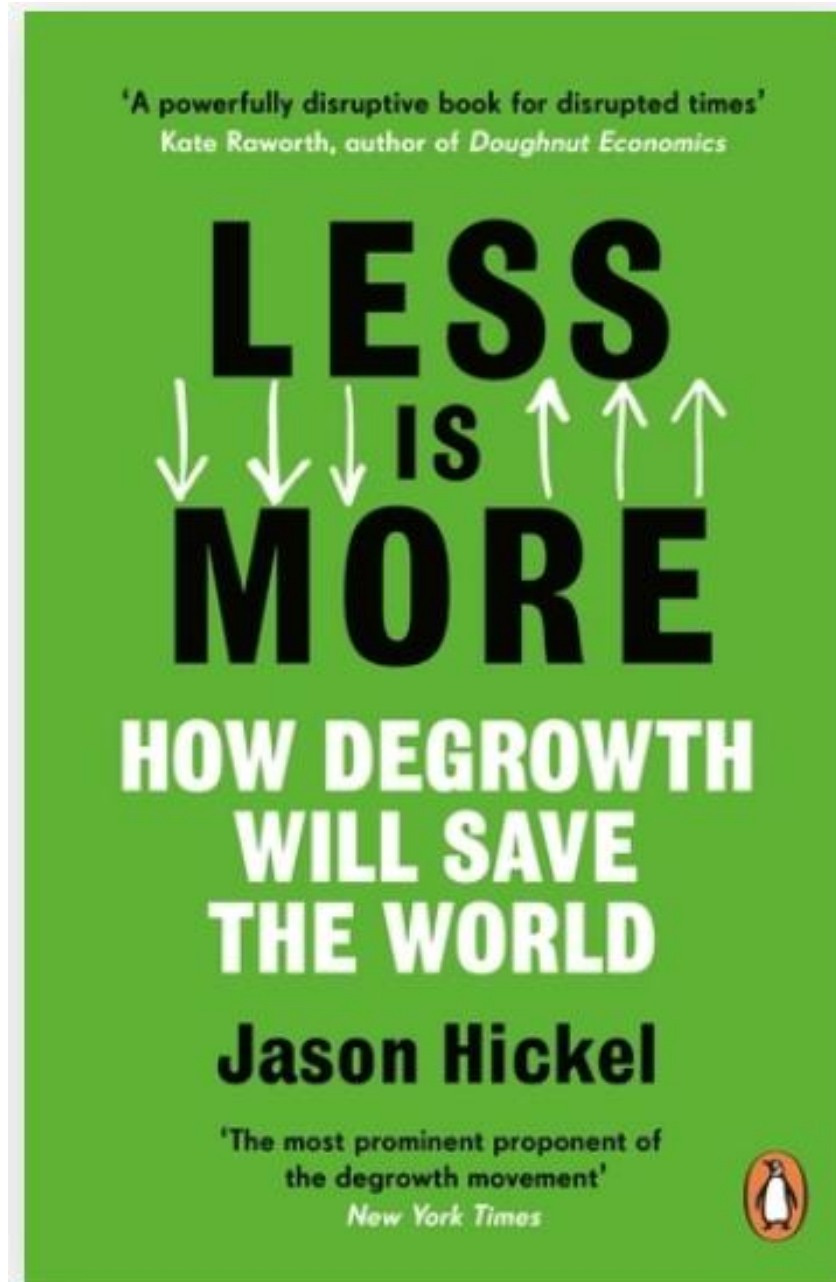
Danny Dorling, Professor of Geography, University of Oxford

“

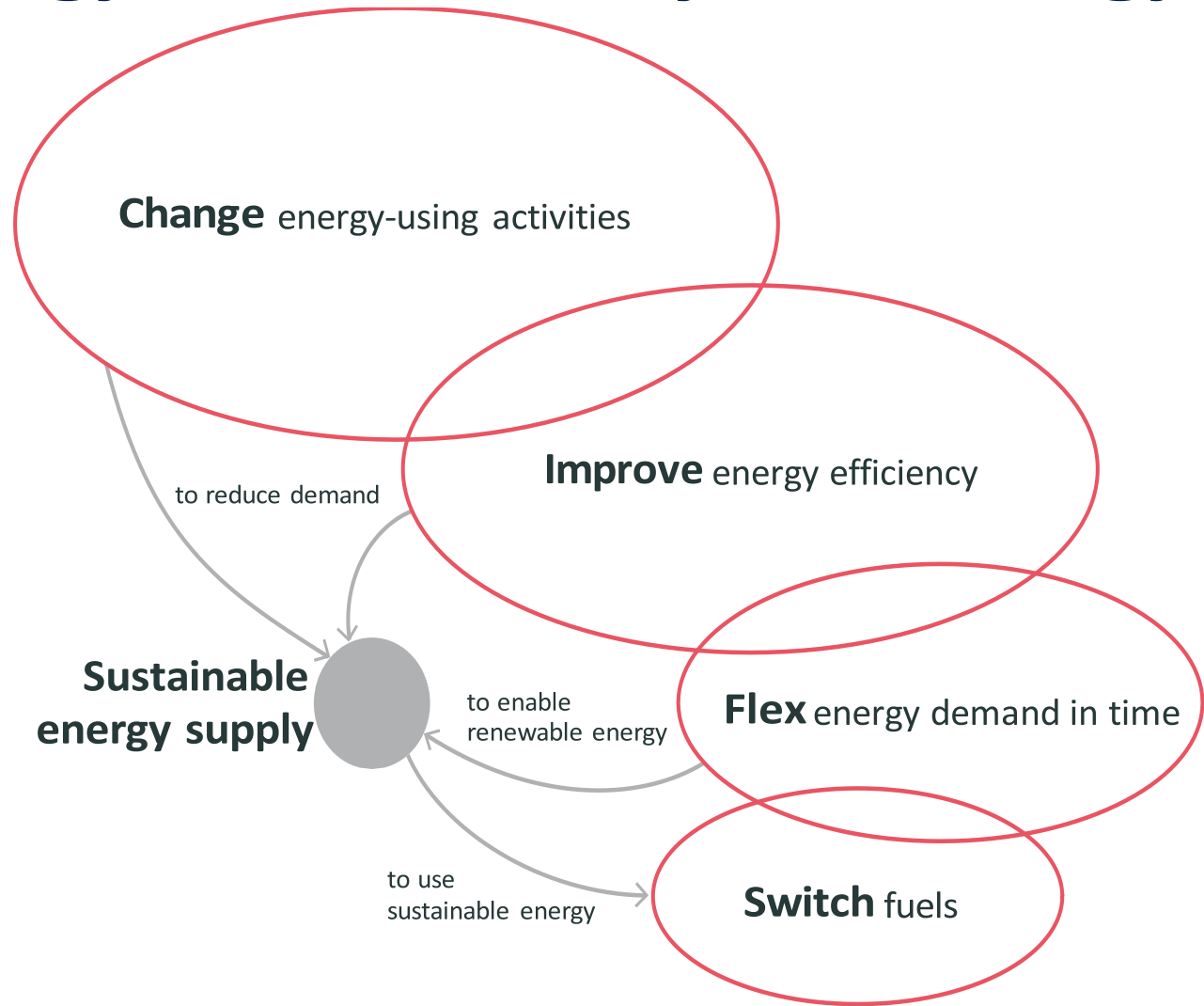
A powerfully disruptive book for disrupted times. Jason Hickel takes all we've been been told about growth and development and turns it inside out, offering instead a radically possible vision of a post-growth future. If you're looking for transformative...

”

Kate Raworth, economist and author of *Doughnut Economics*

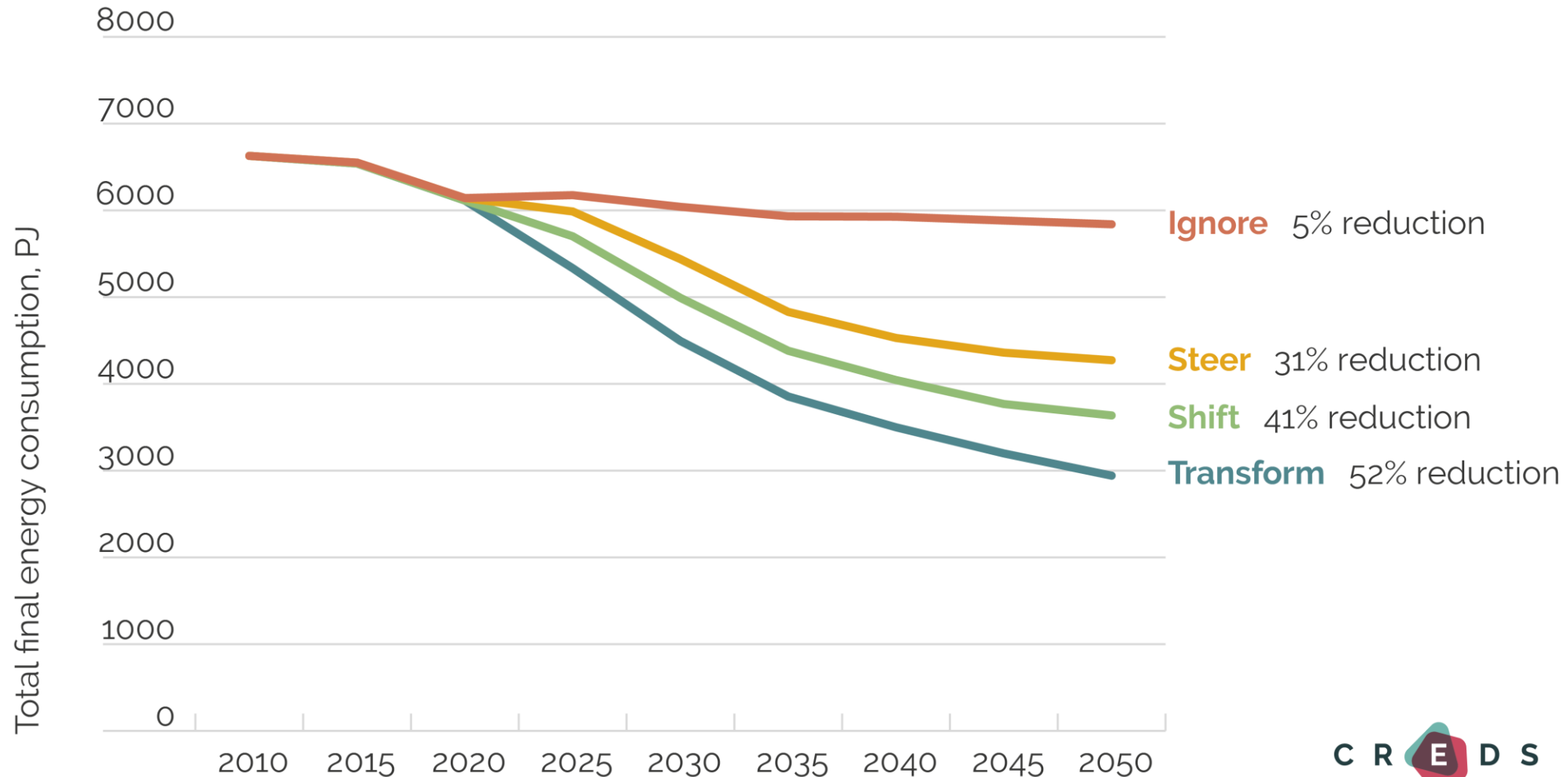


Thinking about energy demand: beyond energy efficiency



Source: Eyre and Killip, 2019

CREDS UK energy demand reduction modelling



‘Mobesity’ a new word for a worrying trend



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Expert Comment: Confronting ‘mobesity’ is vital for the global electrification of transport

PUBLISHED
24 JUN 2024

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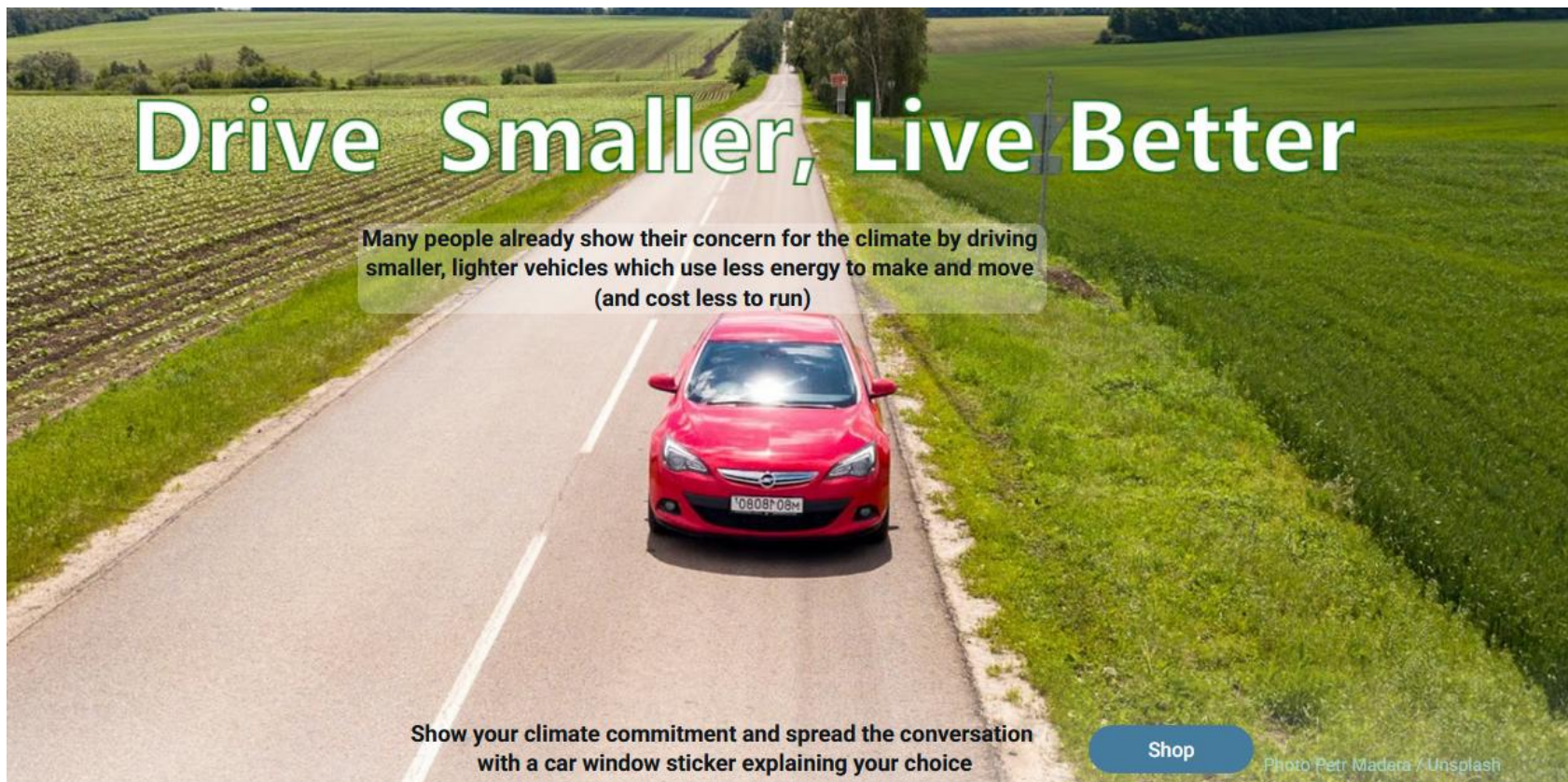
[CLIMATE](#) [ENVIRONMENT](#) [EXPERT OPINION](#) [SOCIAL SCIENCES](#) [SUSTAINABILITY](#)

The proliferation of large electric vehicles risks undermining the environmental and economic benefits of the green transport transition, argues [Christian Brand](#), Professor of Transport, Energy and Climate Change at the [Transport Studies Unit](#) in the [School of Geography and the Environment](#).

“Despite advances in fuel efficiency and electrification, the trend toward heavier and less efficient vehicles such as SUVs, which emit roughly 20% more emissions than an average medium-sized car, has largely nullified the improvements in energy consumption and emissions achieved elsewhere in the world’s passenger car fleet in recent decades.”

IEA, 2024

<https://www.ox.ac.uk/news/2024-06-24-expert-comment-confronting-mobesity-vital-global-electrification-transport>



A voluntary campaign will clearly only be one small step towards changing the culture / market in favour of ever larger cars,



Martin Burgess, ECI

The Museum of Climate Hope

A trail of objects, with dedicated signage, in the museums' permanent collections which are on public display.

A digital trail: climatehope.uk

Something around which we are building public engagement events.

An opportunity for research.

An opportunity for education, communication, knowledge exchange and impact.

(climatehope.uk)



New language and visions

Note the way 'Abundance' frames alternatives as “the narrow narrative of scarcity that has taken hold.” (p22)

Positive visions clearly matter – what do you think is the best story we've got?

- Energy independence
- Energy security
- Self-sufficiency
- Energy justice

Concluding remarks

Shouldn't we just ignore all this stuff and stick to our science?

I don't think we can: 'Net Zero' (which was a consensus) is being politicised and positioned as a 'them' solution for which the costs will be borne by 'us'

The Abundance narrative is obviously attractive. Can 'less is more' be persuasive when 'more is more' is the competing idea?

Powerful vision for a better future or a flawed fantasy? I think it's probably both.

We've got the science on our side, but not necessarily the stories.

Can we learn from the changing focus in nature / ecology research and action from 'nature conservation' to 're-wilding' and 'nature recovery'?

Exploring futures – artists, architects, museums, etc. must be part of this.

What else would you suggest?

References, bibliography & picture credits

References

Barrett, J., Pye, S., Betts-Davies, S. *et al.* Energy demand reduction options for meeting national zero-emission targets in the United Kingdom. *Nat Energy* 7, 726–735 (2022). <https://doi.org/10.1038/s41560-022-01057-y>

Darby, S. and Fawcett, T. (2018) [Energy sufficiency: an introduction](#). A concept paper for ECEEE. European Council for an Energy Efficient Economy.

Fawcett, T., Parrish, B., Azzouz, L., Suliman, A., Narayan, U., (2025) [The role of energy in fostering and enabling sustainable lifestyles: a sufficiency approach](#) in Handbook of Research on Sustainable Lifestyles, Edward Elgar (forthcoming)

Rosenow, J. and Eyre, N. (2022) [Reinventing energy efficiency for net zero](#). ERSS <https://doi.org/10.1016/j.erss.2022.102602>

Sahakian, M., Fawcett, T., Darby, S. (2024) [Energy sufficiency in buildings and cities: current research, future directions](#). *Buildings and Cities*, 5(1): 692-703

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Scanned from John Maynard Keynes, *Essays in Persuasion*, New York: W.W.Norton & Co., 1963, pp. 358-373
(<http://www.econ.yale.edu/smith/econ116a/keynes1.pdf>)

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