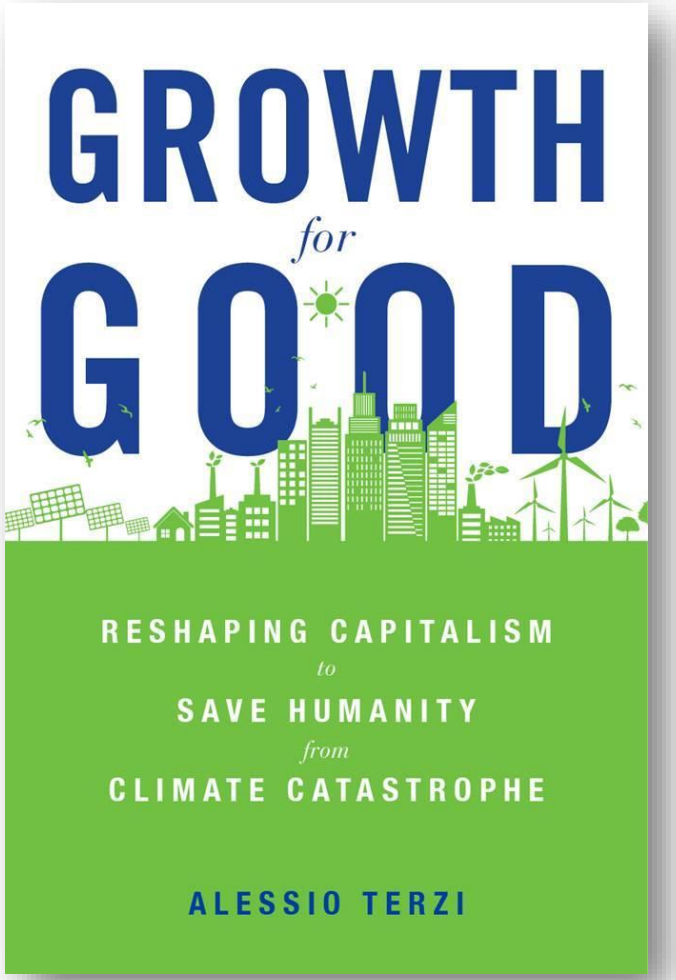
Growth for Good: Reshaping Capitalism to Save Humanity from Climate Catastrophe

Alessio Terzi

The views expressed here are solely those of the author.

The book



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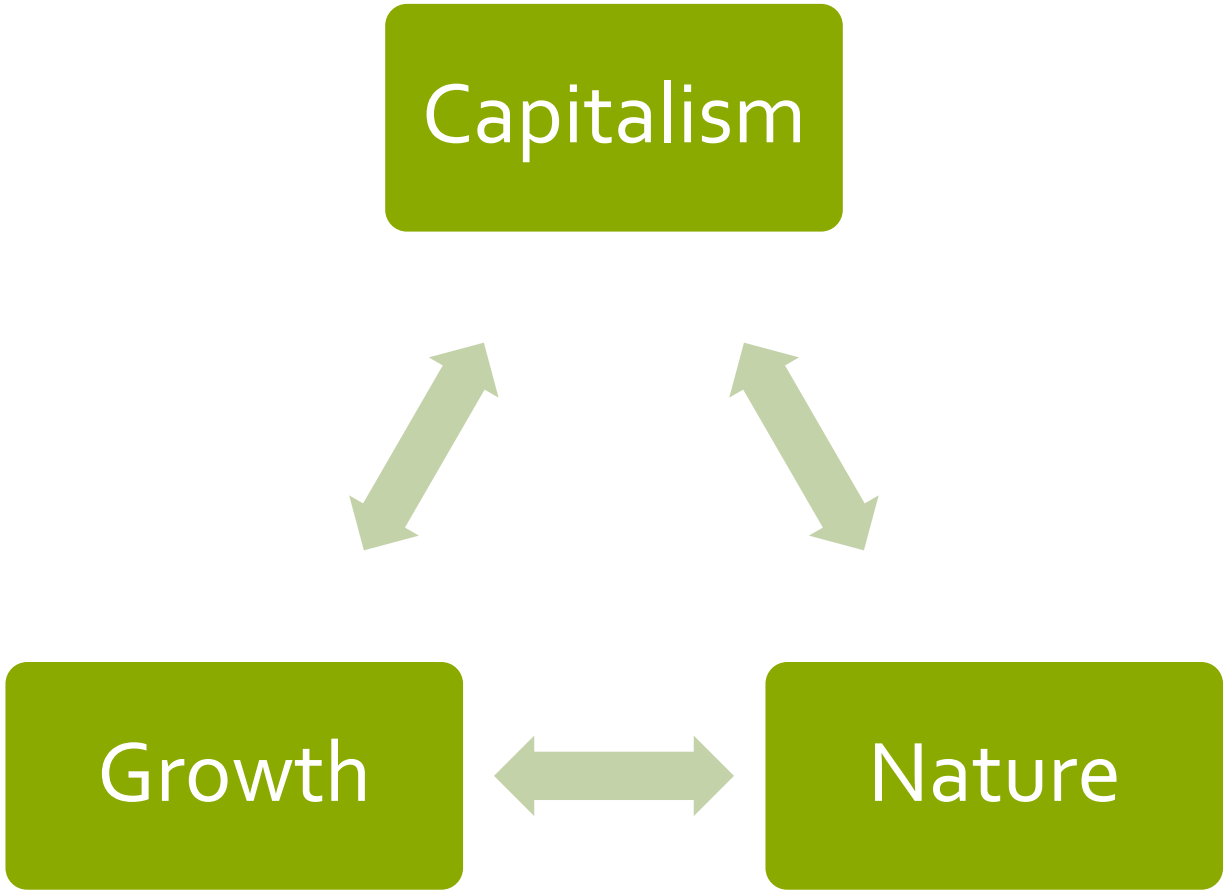
World

The genesis

The (un?-)holy trinity



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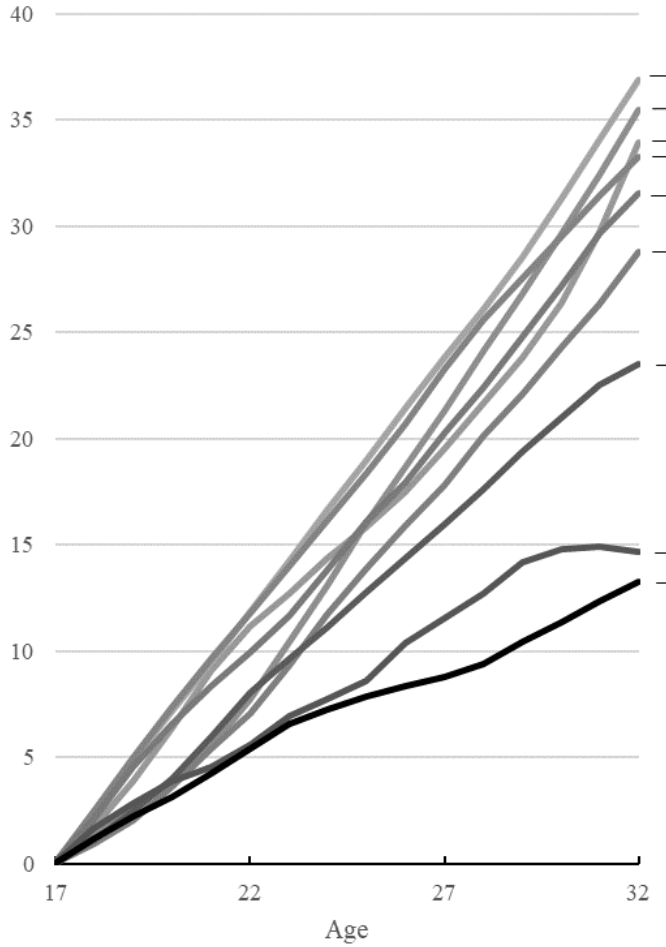

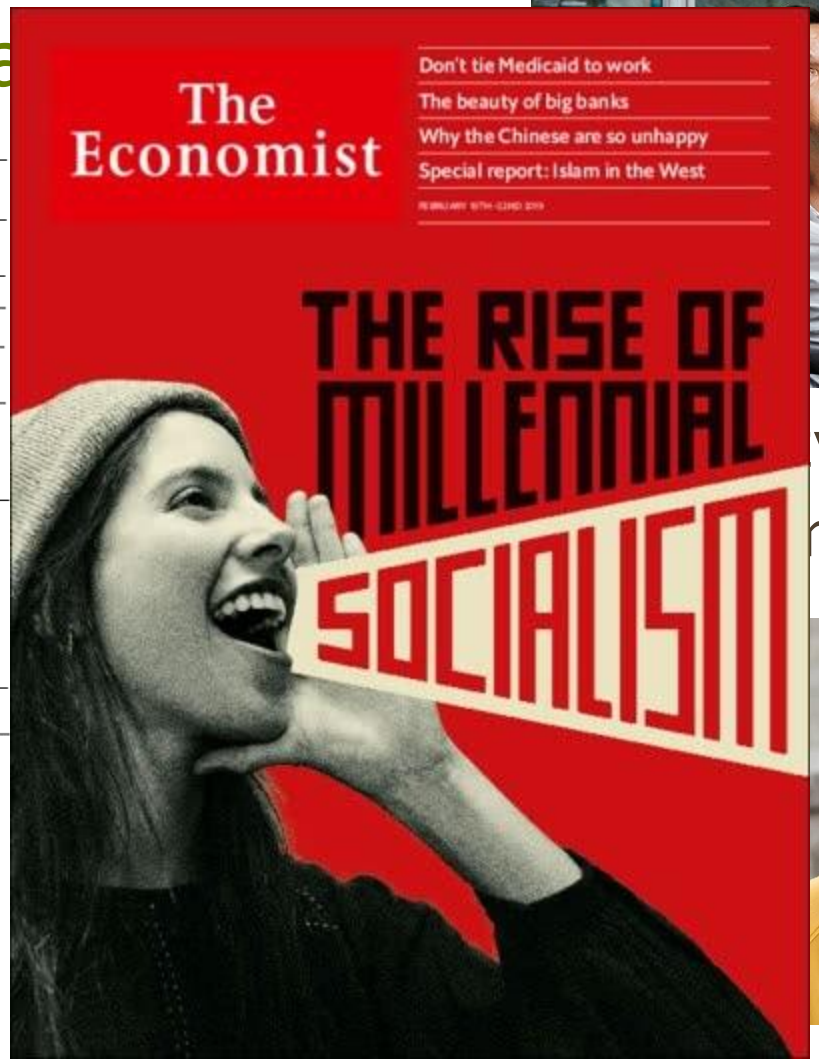

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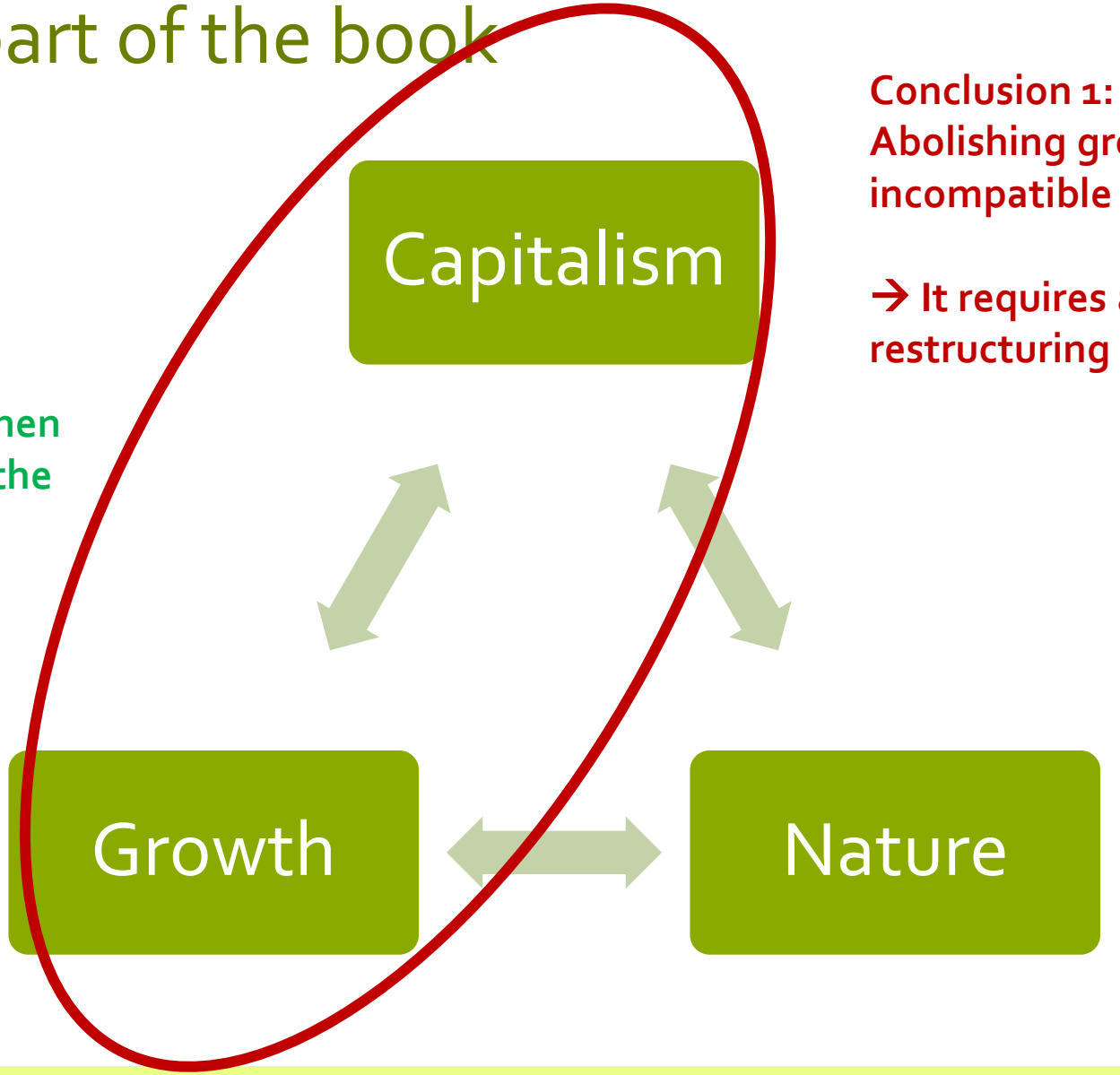
nental awareness

Cumulative real GDP per capita growth during each generation's first 15 years in the workforce, starting at 18 years of age, averaged across birth years.

The first part of the book

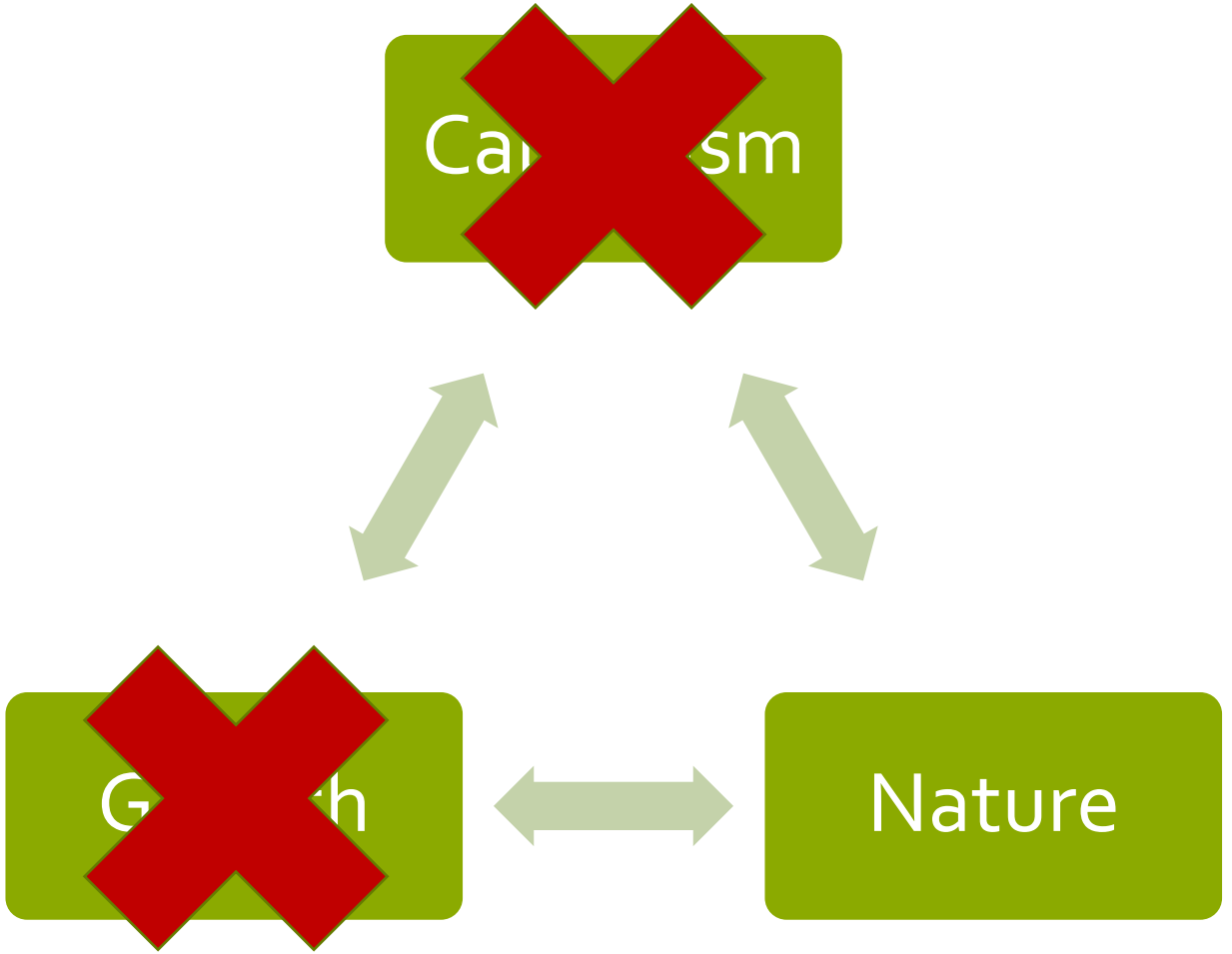


Implication:
If you call to abolish growth, then you must be ready to provide the blueprint for an alternative society

Conclusion 1:
Abolishing growth would be incompatible with capitalism

→ It requires a complete societal restructuring

Degrowth: Ecosocialism & steady state economy



& a better sharing of available/limited resources embracing sufficiency

Degrowth policy conclusion

- Abandon economic growth and hyper-consumerism in advanced economies
- Leave space for further economic growth in poor countries
- Continue R&D, but (centrally) focused on green transition
- Embrace a life-style of sufficiency (e.g. Eco-villages)
- Produce locally
- Direct/collegial democracy

G4G comes to different conclusions

1. **Growth and inequality**: a steady state environment exacerbates conflict within and between societies over limited resources

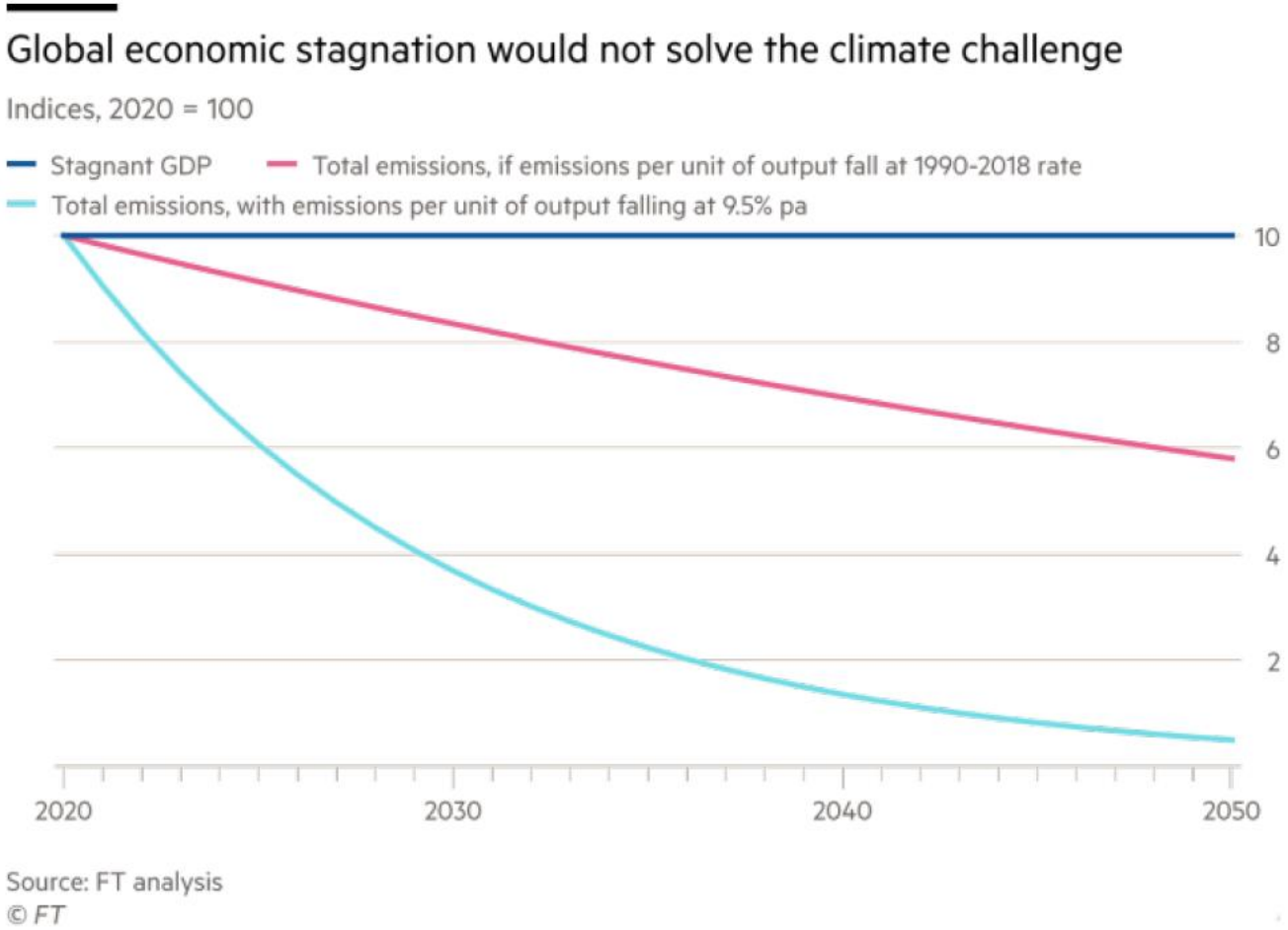
   this is because..

2. **The growth imperative:** is not an imposition of "the system" over otherwise indifferent people. But rather, humans have an inbuilt 'desire for more'..

   Which ultimately originates from…

3. **Growth and technology:** the desire to use technology and knowhow to shape the world, and therefore self-determination as a species.

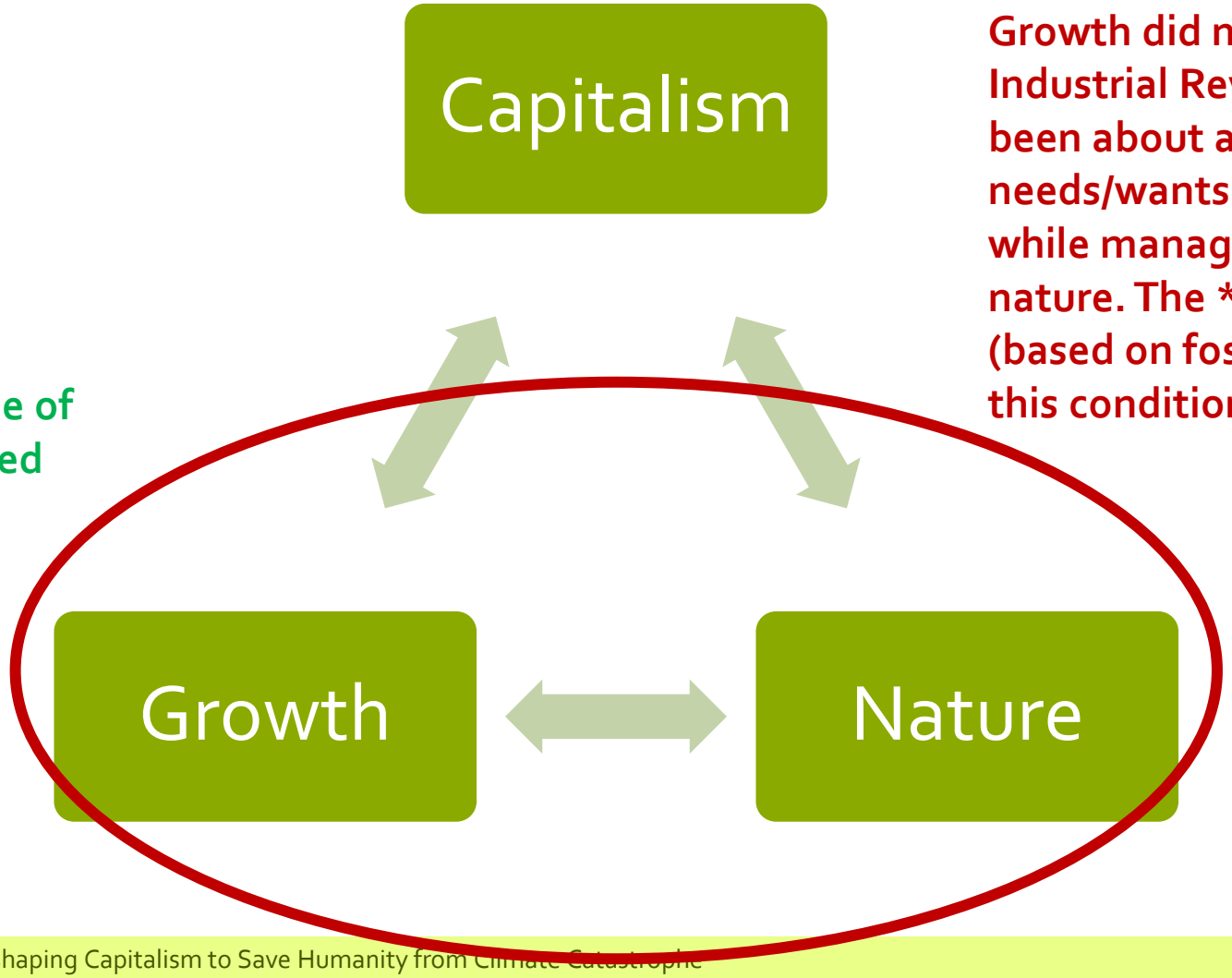
Tech acceleration even in steady state



- Halting economic growth alone will hardly suffice to achieve net zero
- This can only imply two things:

1. Either you need a sharp reduction in GDP per capita in rich countries (in the order of magnitude of -60%, as estimated by degrowth economist Peter Victor, 2012)
2. Or, you need to continue accelerating on green R&D and adoption

Growth and nature



Implication:
A *different* / reshaped type of capitalism & growth is needed

Conclusion:
Growth did not start with the Industrial Revolution and has always been about achieving more needs/wants using knowhow/tech, while managing our relationship with nature. The *current* growth model (based on fossil fuels) no longer fulfils this condition

The overarching message

- Avoiding a climate disaster goes through a restructuring of the whole economy and a switch to green technology
- Capitalism can be a forceful ally, by fostering the development and deployment of green tech
- However, this will not happen on its own, and surely not at the speed required (climate neutral by 2050)

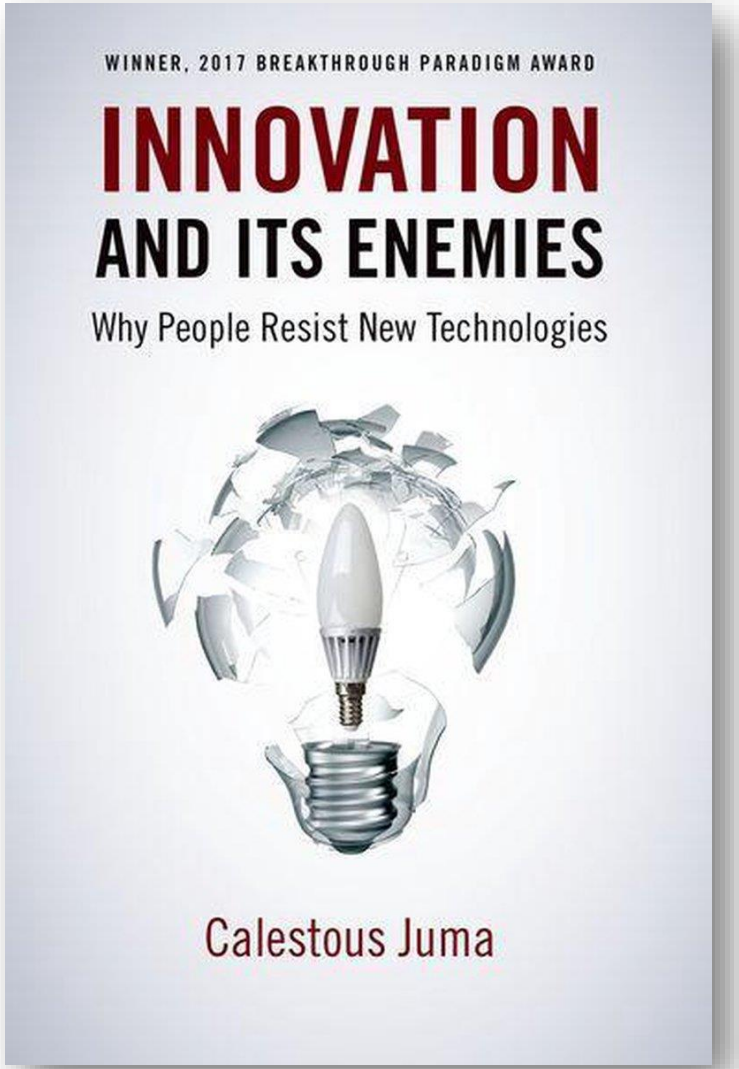
→Actions required by governments (but also pioneering businesses and engaged citizens)

'Whole-of-nation' approach

Technology and just transition

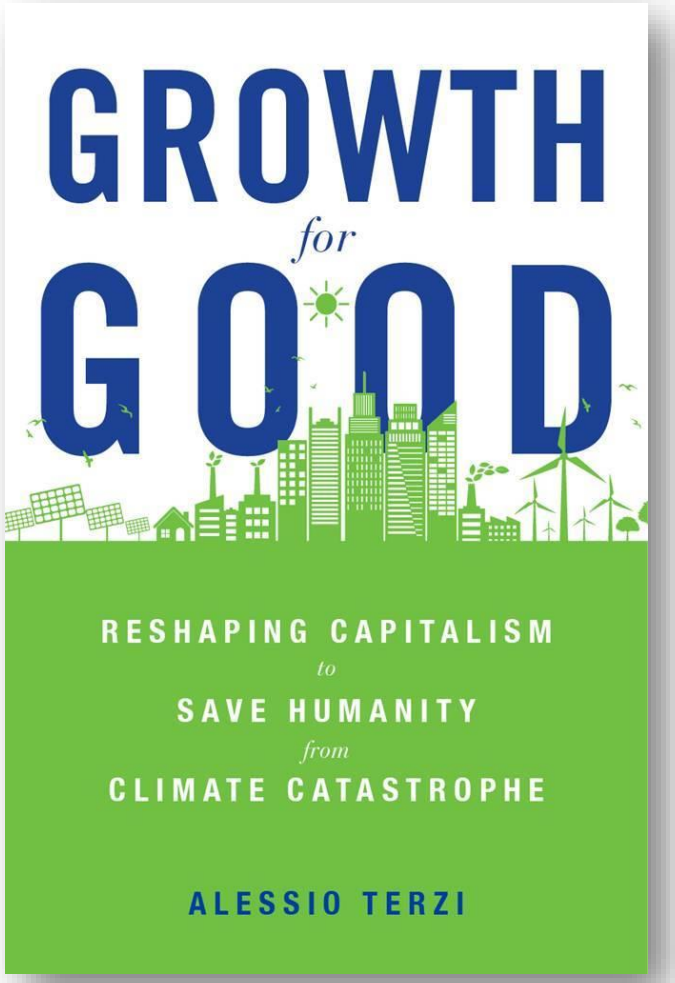
- We are talking about transformation on the scale of an Industrial Revolution
- Policy will accelerate this even more, to achieve climate goals and avoid the worst outcomes
- Some areas/regions/professions will be left behind. Cultural views will be shattered

→ Green policy and inclusive social policy must proceed hand in hand or people will oppose the transition



There is much more in the book

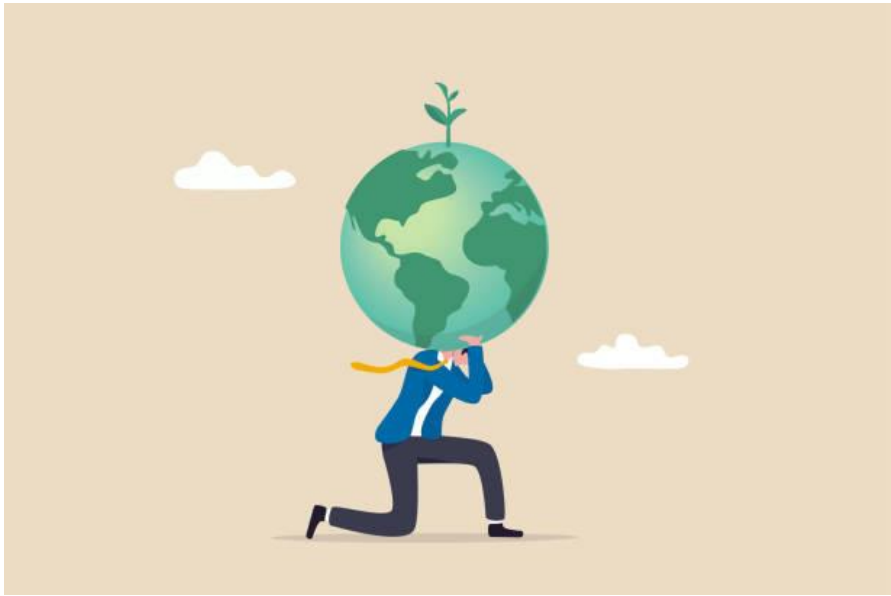
- Discussion on the interplay between growth, wellbeing and liberal democracy (*Ch. 2*)
- A zoom-in on Italy as a case study of the negative dynamics unleashed in a steady state economy (*Ch. 4*)
- International cooperation in the face of climate change (*Ch. 7*)
- Green macro, or else what happens to growth and jobs if we implement Green Deals (*Conclusion*)



The cost of greening

- According to one narrative..
- Green transition represents large costs in the short term
  - "The green option is more expensive"
- It is not really an investment opportunity, because in the best case scenario we simply get to keep what we already have
  - Think ICE -> EV
  - More like military expenditure. A necessary evil
- It creates stranded assets

→ Macro models suggest muted impact on GDP (and net job creation)



Defining the baseline

Figure 3.1. Risks from Unmitigated Climate Change

Under the current trajectory of emissions, the probability of keeping global warming below 1.5°C would drop to 50 percent in about 15 years. Global temperatures under business-as-usual would increase to levels not seen in millions of years, triggering substantial income losses and raising the risk of catastrophic outcomes.

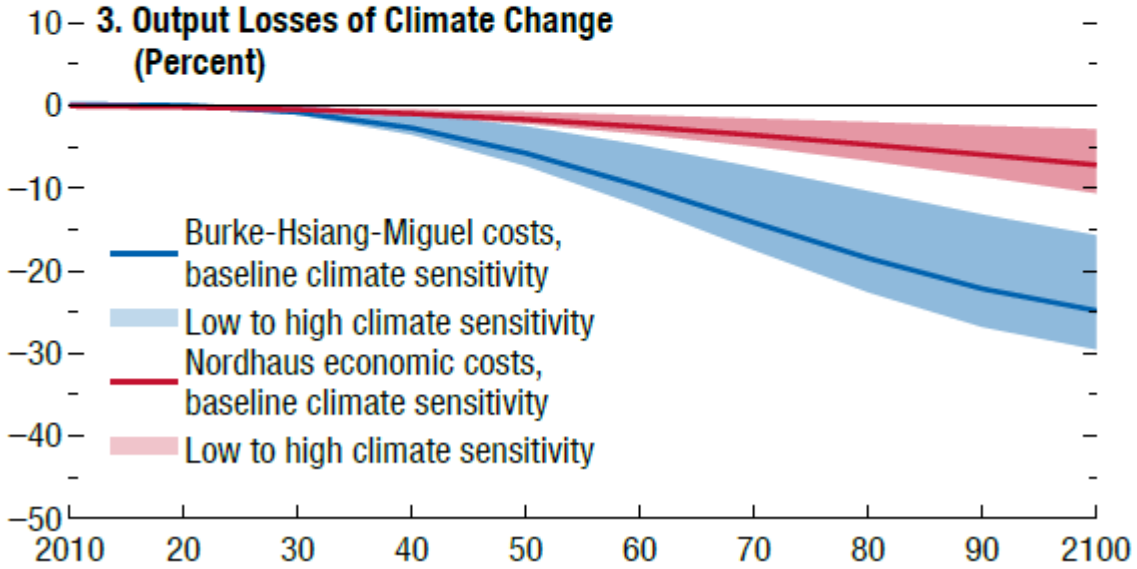
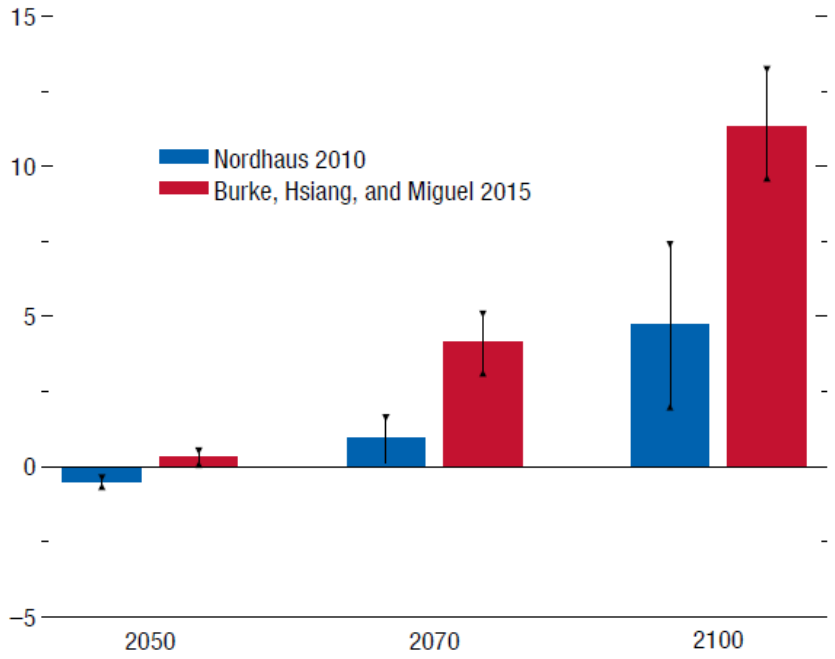


Figure 3.7. Medium- to Long-Term Output Gains from Climate Change Mitigation
(Percent of baseline GDP)

Climate change mitigation results in substantial output gains in the second half of the century.



Source: IMF (2020)

→ **Poor integration of economic and climate models** (CEA, 2022; Pisani-Ferry, 2019)

The Green Deal economy

- Typically, the green transformation is modelled as a tax shift, from labour to carbon
- But of course Green Deals are much more, encompassing large public investment plans, subsidies to green R&D, carbon border adjustment, etc.

- More broadly, the green transition will require a complete transformation of basically all of production, consumption, agriculture, housing, transport..
- …and in essence the whole structure of the economy

→ **(Green) Lucas Critique** (Terzi, 2022b)

The Green Industrial Revolution

Because of how wide-reaching and all-encompassing the green transformation will be, it is probably a better comparison to the way Industrial Revolutions played out, implying..

- A complete recasting of comparative advantages across the globe
- Some countries/companies will emerge as winners, others will remain stuck in technologies that are perceived as old and lower quality

The hist

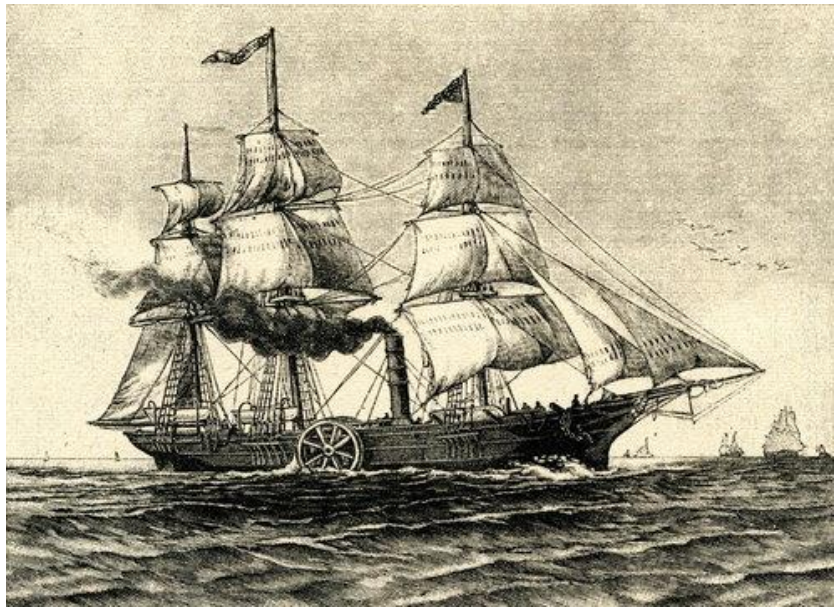
In a majority … the same service (i.e. h… acteristics (e.g. easier, c… rice of the service they …] because some consu… additional characteristic… (Fouquet, 2010)

The Great Smog of London, Dec 5-9 1952

Fro…	
Resi…	
Anir…	
Stea…	
Hors…	
Sail…	
Railv…	
Candles	Gas
Gas	Electricity

Case study: Steam ships

- The first steamship crossed the North Atlantic no faster than the best contemporary sail ships with favourable winds (Smil, 2017)
- From the first ships built, in 1815, to 1830, entrepreneurs saw the potential of steam power and pushed its expansion. […] Sailing ships improved efficiency and competitiveness after the introduction of steam ships, and grew in importance. Early steam ships were highly inefficient, requiring vast quantities of coal to fuel the voyage. Since they could less easily fuel-up on route than a train, the coal required displaced valuable space that might carry goods or passengers. It was not until major improvements in fuel efficiency in the latter part of the nineteenth century that it finally replaced the sailing ship (Fouquet, 2010)



SS Savannah, 1818

The Adam Smith fallacy

Critics would argue that green tech does not display a higher productivity than the polluting option. Hence, it is not an Industrial Revolution.

- In the early stages on an IR, the new tech does not necessarily reflect higher productivity gains!
- Trial and error with mechanisation initially led to widely dispersed productivity draws and low average productivity.
  - In the subsequent decades, high productivity growth was observed, as new entrants adopted improved methods of production/organisation (Juhász et al, 2020)
- The same with the Second IR
  - Line shaft -> assembly line (Aghion et al, 2021)

The scope for secondary innovation

- Green innovation will not stop at replacing the polluting option with the green option

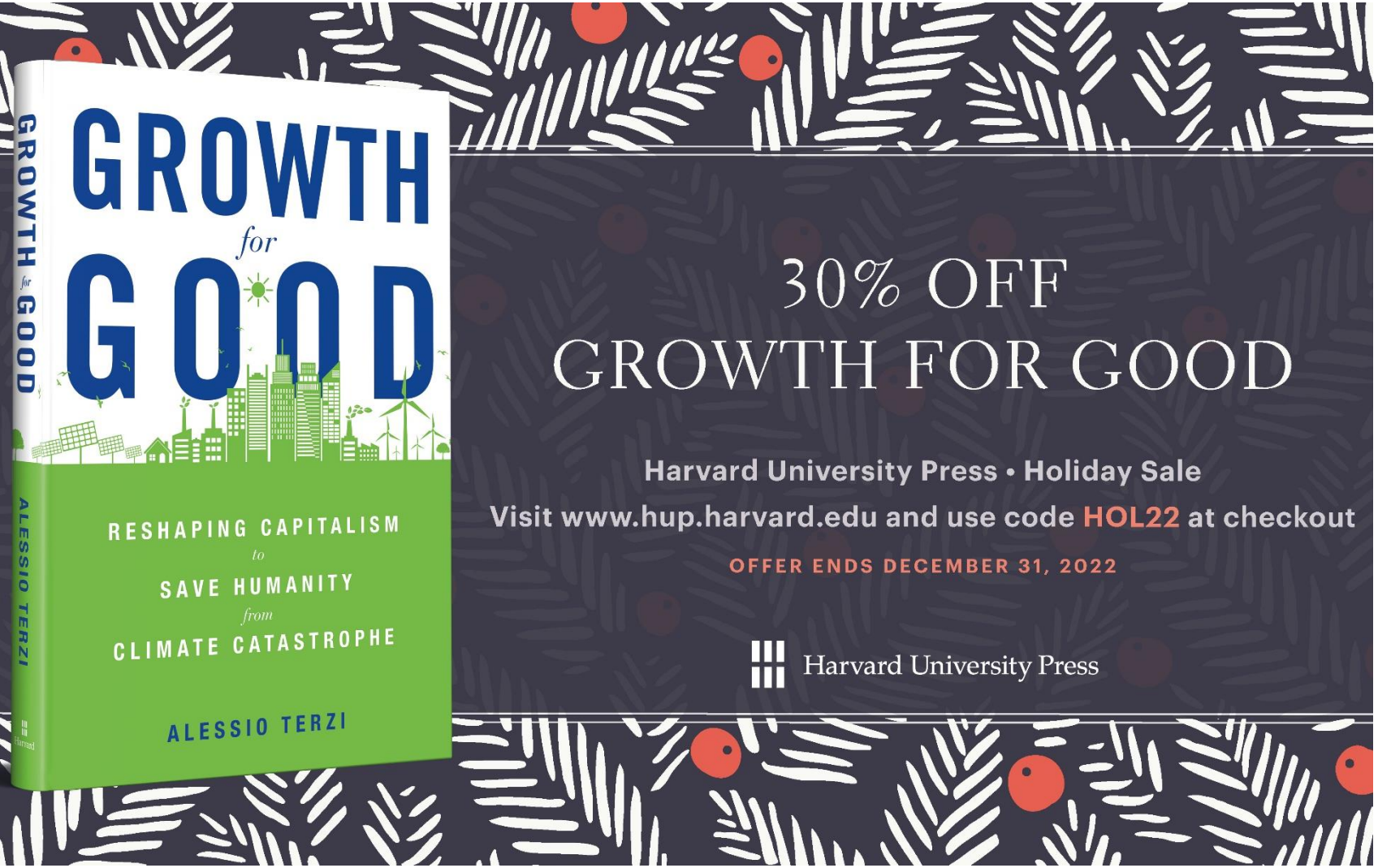
"For two hundred years, technologies based on fossil fuel have been explored. Diminishing returns may have set in. Climate change has induced new searches in other parts of the technology frontier. […] the green economy may usher in a new era of high productivity growth."

Stern and Stiglitz (2021: 61)

Renewable energies could easily become by far the cheapest energy source in history (IEA, 2020)

Implications

1. It makes self-interested (commercial) sense to be at the forefront of the green transition, defining standards and steering the very course of the technological transformation
2. Governments cannot be expected to sit and wait to discover if their country ends up on the winning or losing end, just as they have during the First Industrial Revolution (Beckert, 2014)
   - Active industrial policy, which lays the seed for defensive industrial policy
   - Active use of trade (e.g. green clauses in trade treaties, carbon border tax, etc.)
3. There is no real trade-off for emerging markets between development and climate policies
   - Largest export markets will progressively restrict polluting options
   - Roll out in pioneering nations will make the green option the cheapest option also in EMs



Thank you!

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