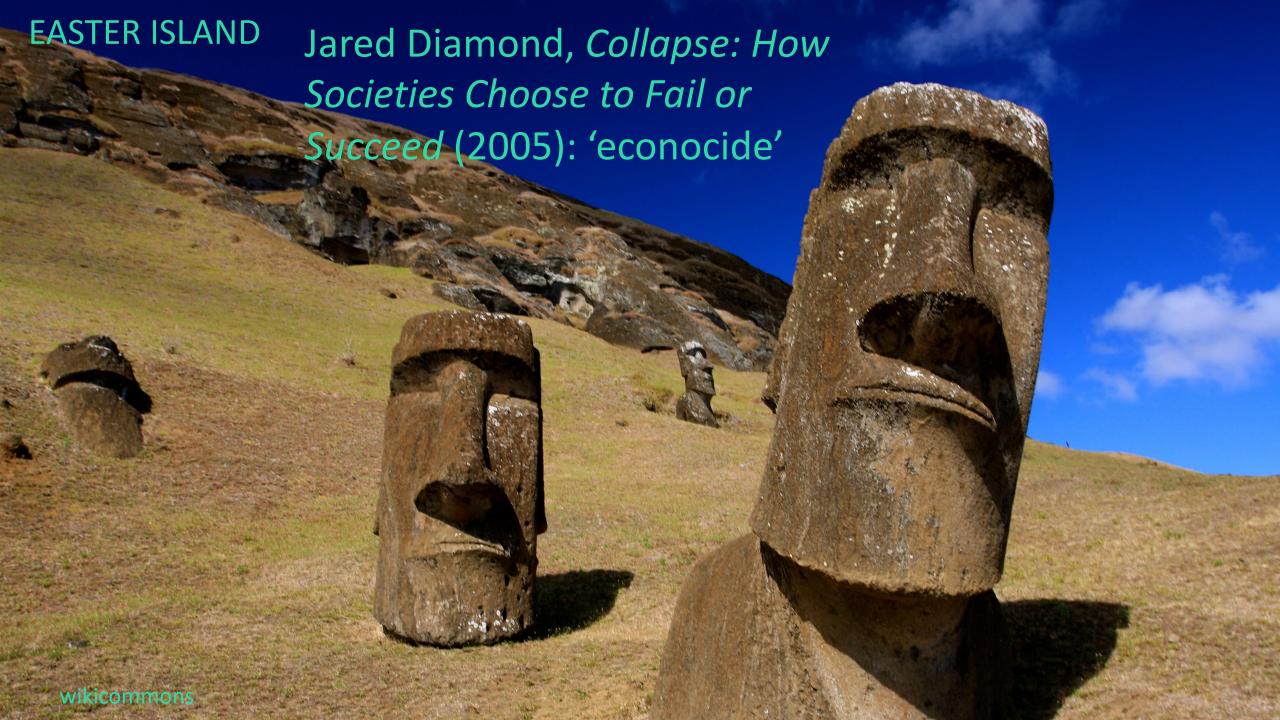
INTERGENERATIONAL JUSTICE

WHAT DO WE OWE TO THOSE NOT YET BORN?

MARTIN DAUNTON









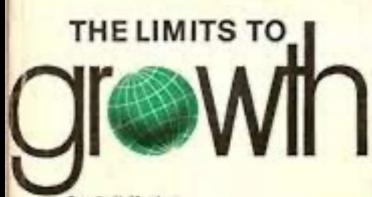


Garrett Hardin, 1968: the tragedy of the commons and neo-Malthusianism

• 'Ruin is the destination toward which all men rush, each pursues his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all'.

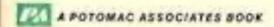
 Neo-Malthusian: welfare state means the improvident and their 'germ line' survive

Need to surrender freedom to breed



Donella H. Meadows Dennis L. Meadows Jørgen Randers William W. Behrens III

A Report for THE CLUB OF ROME'S Project on the Predicament of Mankind



\$2.75



GOVERNING

the COMMONS



ELINOR OSTROM

The Evolution of Institutions for Collective Action



Political Economy of Institutions and Decisions

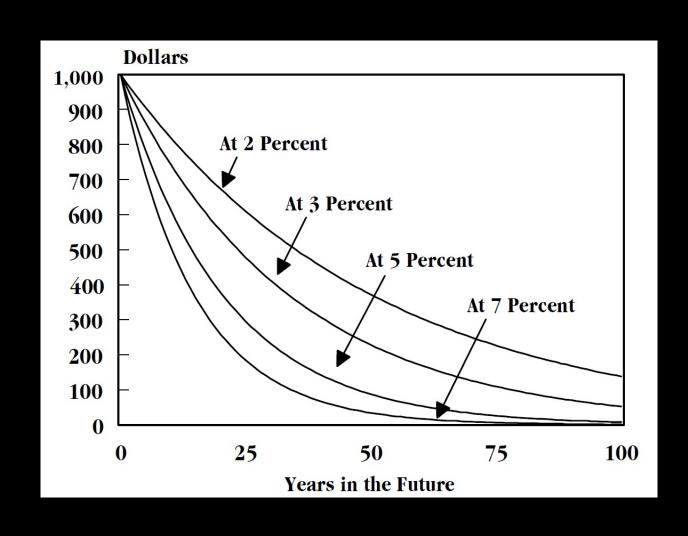
Elinor Ostrom

The tragedy is avoidable –

By creating institutions of collective action

Can they be scaled up to the global level?

Should we discount ... and by how much?



A C Pigou, 1920



Our telescopic faculty is defective.... We see future pleasures, as it were, on a diminished scale... This reveals far-reaching economic disharmony. For it implies that people distribute their resources between the present, the near future and the remote future on the basis of a wholly irrational preference.'



Frank Ramsey, 'A mathematical theory of saving', 1928

Question: 'how much of its income shall a nation save?'

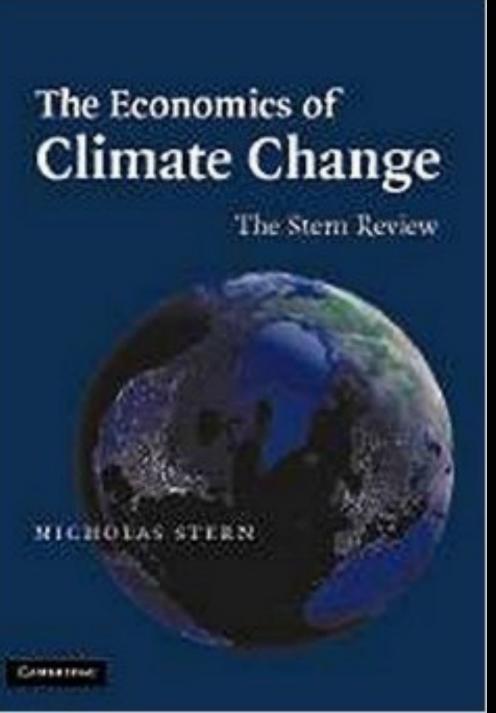
'it is assumed we do not discount later enjoyments in comparison with earlier ones, a practice which is ethically indefensible and arises merely from the weakness of the imagination'.

What is the basis for a 'social discount rate'?

 'time preference' and interest rate: 'descriptive' of observed behaviour or 'prescriptive' and ethical

Changes in utility from consumption as income changes

 The future will be richer than us — in the same way that we impose a higher tax on the rich than the poor at a given time, so we should across time



Nicholas Stern report, 2007

- Discount rate: 1.4 per cent. Low because gives a time preference of 0.1 per cent, to allow for extinction.
 Prescriptive.
- \$1 trillion of damage caused in 100 years is valued at \$247 billion
- Action needs to be immediate and drastic: investment will be worthwhile.
- Spend 1 per cent of total production to reduce greenhouse gases

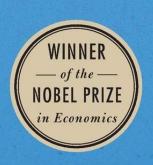
STERN AND ETHICS

'if you care little about future generations you will care little about climate change.... That is not a position which has much foundation in ethics and which many would find unacceptable'.

'If little or no value were placed on prospects for the long-run future, then climate change would be seen as much less of a problem. If, however, one thinks about the ethics in terms of most standard ethical frameworks, there is every reason to take these prospects very seriously.'

"A one-stop source on global warming, seen through the prism of a brilliant economist." — **Fred Andrews**, New York Times

The Climate Casino



Risk, Uncertainty, and Economics for a Warming World

William Nordhaus

William Nordhaus

- Discount rate: varies in his work: 6, 5.5, 4.3 per cent descriptive
- At 6 per cent, \$1 trillion of damage caused in 100 years is valued at \$2.5 billion
- Hardly enough to justify the costs of reducing greenhouse gases now – better to spend the money on other things
- Recommends spending c0.1 per cent of total production or \$9 per capita
- Action should be slow and modest the costs are too high relative to benefits

NORDHAUS AND MARKET REALITIES

"We need to use discount rate that reflects the actual market opportunities that societies face, not an abstract definition of equity taken out of the context of market realities. The logic of market discounting is not just a selfish view that the future should take care of itself. It does not hold that we should consume all our income and make no investments to protect our world or future generations.... The discount rate should be set so that our investible funds are devoted to the most productive uses. A portfolio of efficient investments would definitely include ones to slow global warming. But is also includes investments in other priority areas – health systems at home, cures for tropical diseases, education around the world, and basic research on all kinds of new technologies."

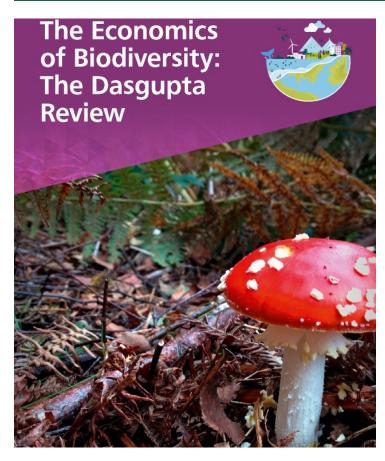
Why it matters:

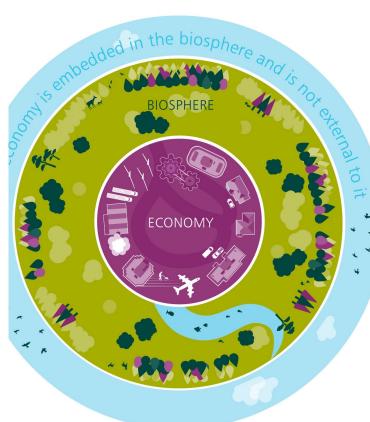
- Governments use the method to set a carbon price which determines whether fossil fuels or renewables are cheaper
- The discount rate determines how urgent action is compared with alternative spending
- Social and ethical assumptions and political choices are hidden in seemingly technical and objective measures: we need to understand their limits and assumptions in the models

The case against discounting – or for a low rate

- Pure time discounting is applicable to building a railway not to climate change which long term and severe: cannot opt for another planet
- Our individual time preference whether to save or consume as self-interested individuals is not the same as how we might feel about future generations: we might adopt a normative or altruistic attitude
- Future generations are not present to have voice should have the same ethical value
- Will the future be richer? The claim rests on continued growth which increases the damage; and future might have different values
- The future has a right to enjoy a world whose climate or environment has not been harmed
- ecological and biodiversity loss: what counts is not only what is counted in GDP

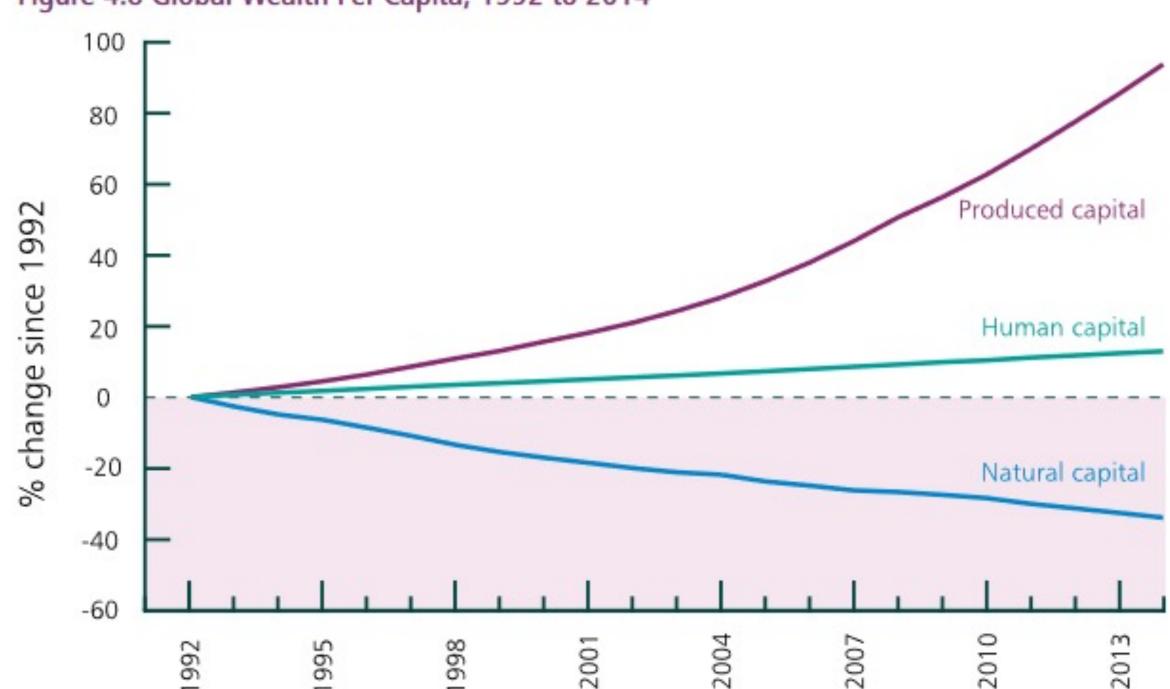
What should we count?





- GDP is **gross** and does not take account of depreciation of assets
- We need an inclusive measure of wealth that includes degradation of the natural environment

Figure 4.8 Global Wealth Per Capita, 1992 to 2014



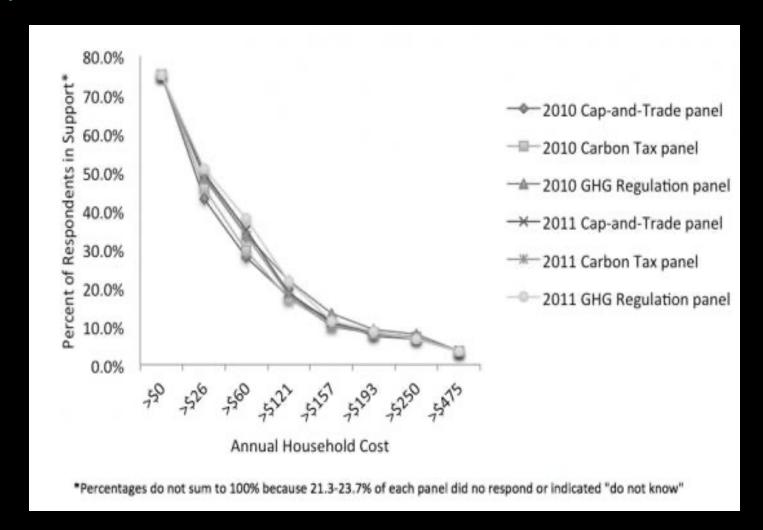
What policies should be adopted?

- Adaptation
- geoengineering
- Personal behaviour
- Supply side antifracking, pipelines
- Demand side: price signals and taxes





Support for carbon tax in US



JD Jenkins, Energy Policy, 69 2014)

REDD+



Establish forest reference emissions baseline level (e.g. historical or business-as-usual trend) Set target trend for emissions reductions efforts Meet reporting obligations under the UNFCCC Monitor progress against target during REDD+ implementation Inform further action Report results Results-based payments Verify results