

# Ecological Economics & Green Economics

Why do we need them?

And what is the difference?

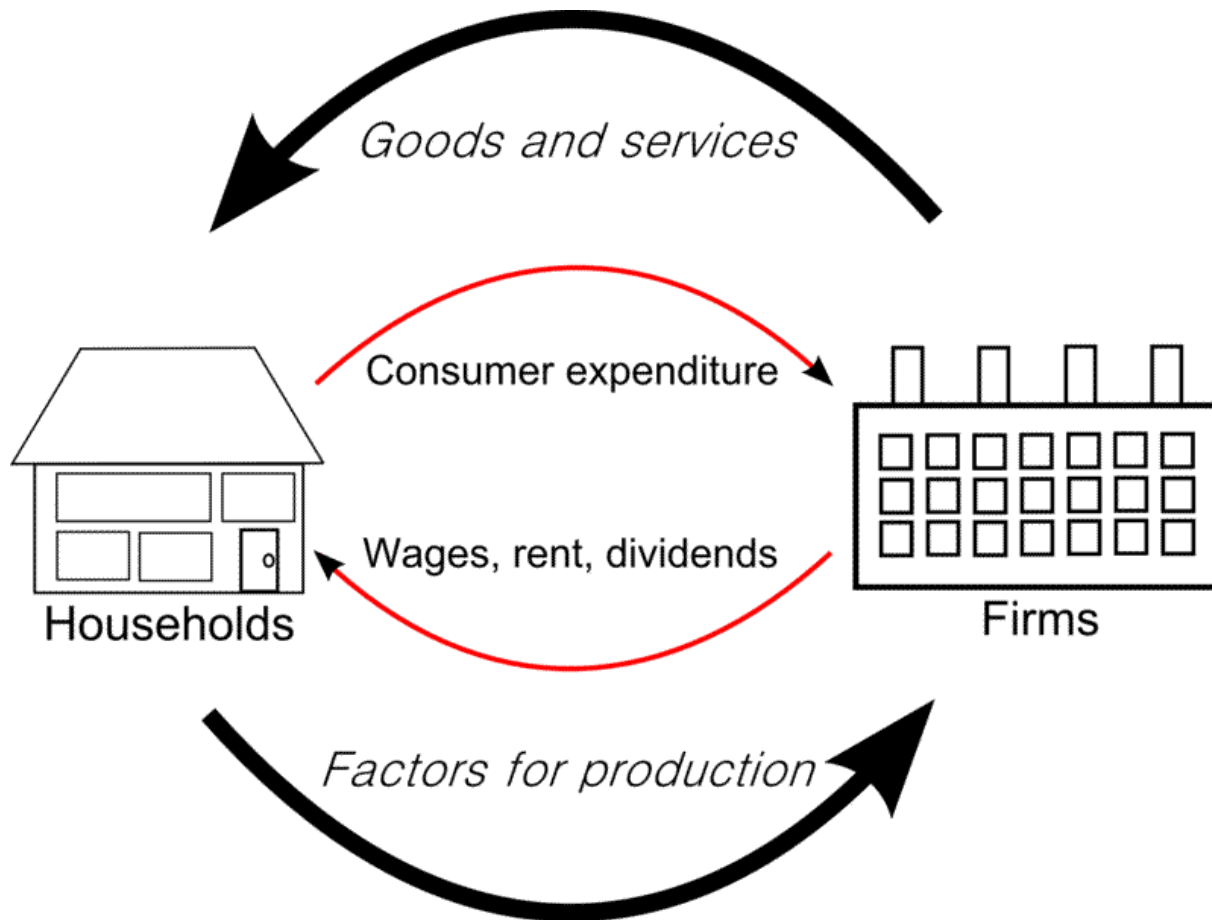
Beth Stratford | Masaryk University | March 2015

# What we're going to discuss over the next eight weeks

MOVE AROUND THE ROOM TO INDICATE YOUR CURRENT THINKING ON THESE TOPICS!

- Why is there a need for 'green' economics?
- \*Can we have infinite economic growth on a finite planet?
- \*Is it possible to deliver 'prosperity without growth'?
- \*Is the current monetary system compatible with environmental sustainability?
- \*Is capitalism compatible with environmental sustainability?
- \*Should we try to put a price on nature's services?
- How can we guarantee fair access to resources under conditions of scarcity?
- How should we measure society's progress?

# The environment is largely absent from mainstream models of the economy



# What's the difference?

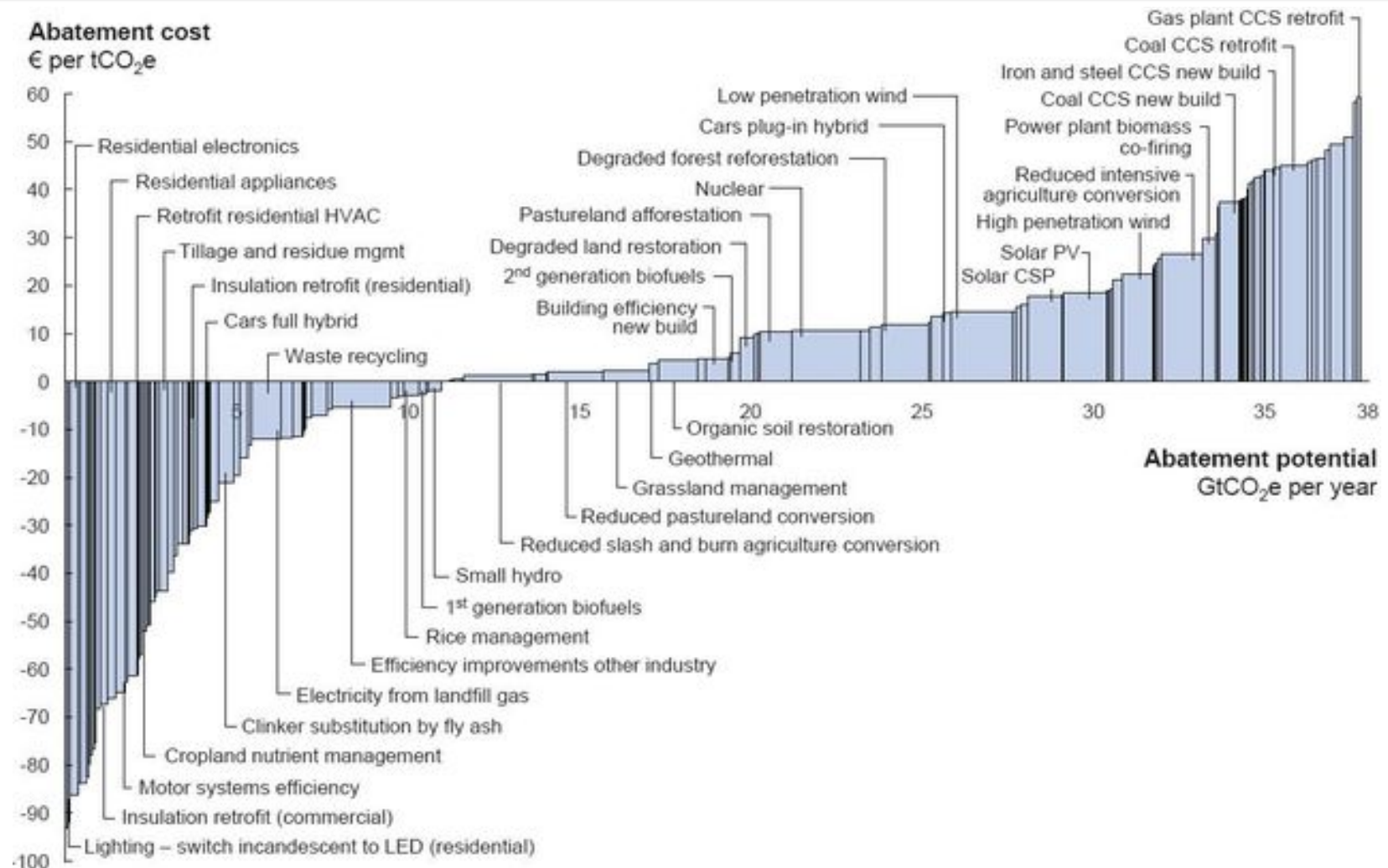
## Environmental Economics

- Emerged in 60s
- Lots of overlap with resource economics
- Sub-discipline within Neo-classical Economics
- Focussed on maths, modelling, theory
- Optimistic about finding technological 'fixes' for environmental problems

## Ecological Economics

## Green Economics

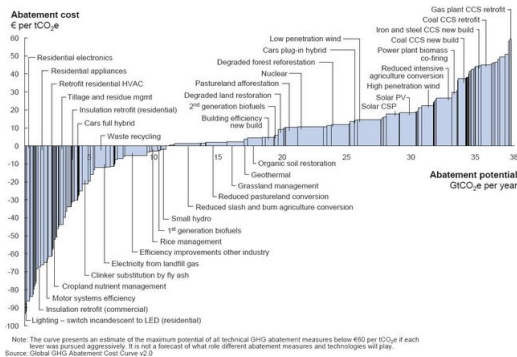
# Environmental cost benefit analyses



Note: The curve presents an estimate of the maximum potential of all technical GHG abatement measures below €60 per tCO<sub>2</sub>e if each lever was pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play.

Source: Global GHG Abatement Cost Curve v2.0

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## Ecological Economics

- Emerged in 80s
- View of economy as sub-system within ecological system
- Pluralistic – drawing heavily on natural science
- Concern with scale, complexity, uncertainty
- Pessimistic about likelihood of technology 'fixes' for environmental problems

## Green Economics

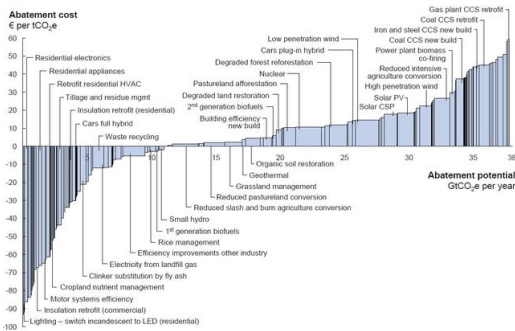
# “What some economists have learned but many have not” (Daly 1985)



"The economy is a wholly owned subsidiary of the environment, not the reverse."

Herman Daly

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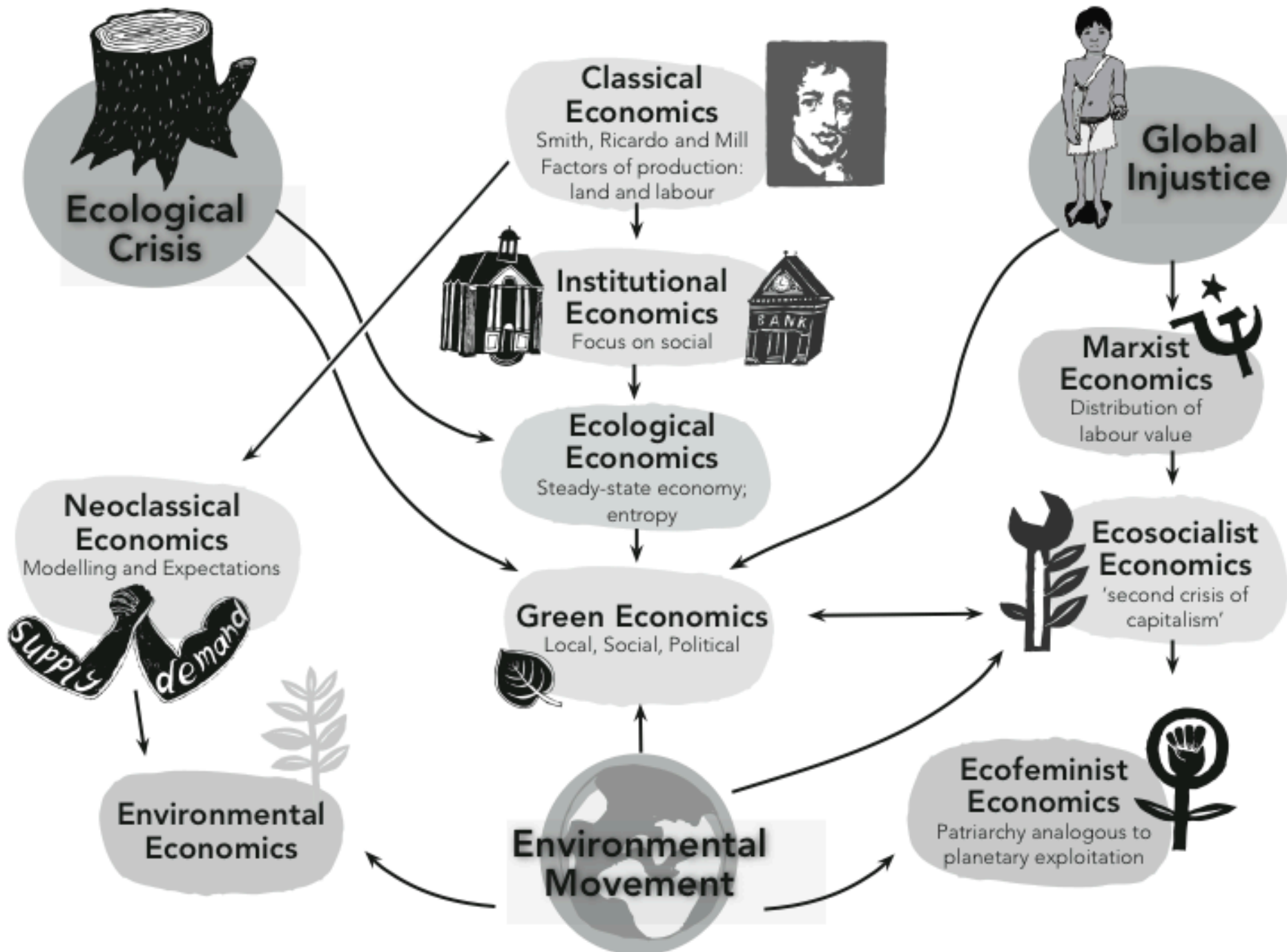
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## Green Economics

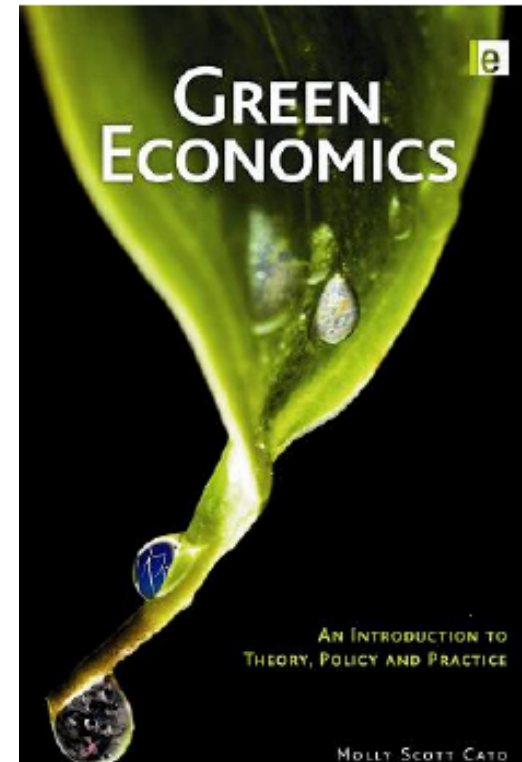
- Emerged late 90s
- Lots of overlap with Ecological Economics, particularly critique of growth
- Pluralistic
- Focus on social justice
- actively engaged as politicians and campaigners - 'civil society intellectuals or academic activists'



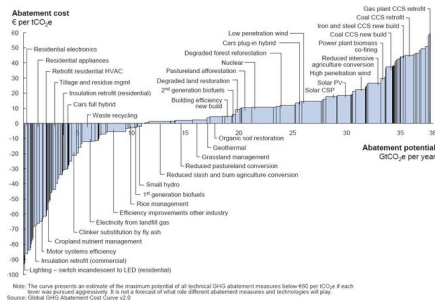


# Key ideas in Green Economics

- Linear to circular economy. Cradle to cradle.
- Match the metabolism of the natural world (Porritt)
- Bioregionalism (trade subsidiarity)
- Calls for a new consumption ethic and for “conviviality instead of productivity”
- Participatory politics



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## Ecological Economics

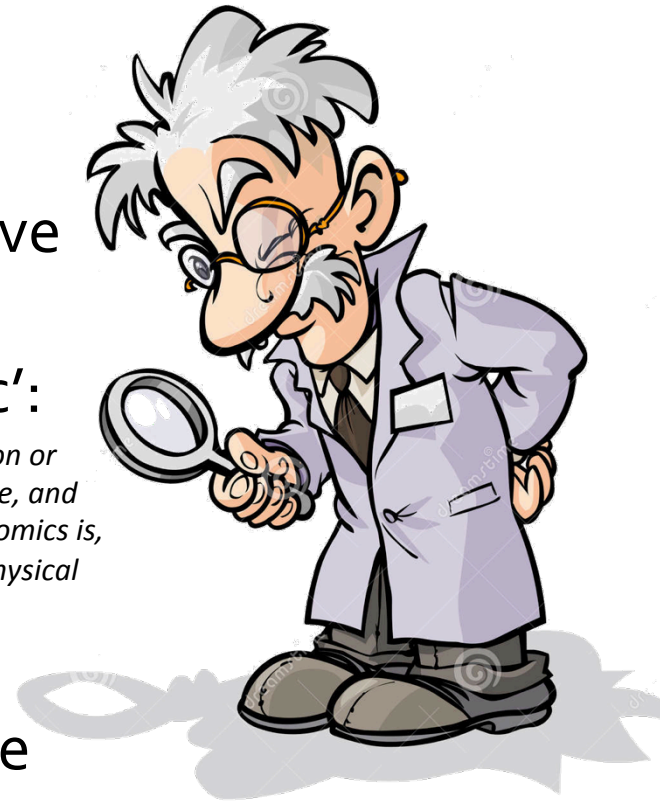
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# Neo-classical economics often presents itself as value free science

- Classical economics started out as branch of moral philosophy
- Neo-classical economics aspired to be more like a natural science
- This led to a distinction between positive and normative economics and condemnation of latter as ‘unscientific’:
  - *Positive economics is in principle independent of any particular ethical position or normative judgments... Its performance is to be judged by the precision, scope, and conformity with experience of the predictions it yields. In short, positive economics is, or can be, an “objective” science, in precisely the same sense as any of the physical sciences. (Friedman, 1953:4)*
- Job of government to determine normative goals. Economists to provide ‘value-free’ technical knowledge



# How do neo-classical economists judge the 'goodness' of policy?

- Compare outcomes not procedures
- Concerned almost exclusively with efficiency.



*Vilfredo Pareto*

By efficient we mean an allocation of goods such that no-one can be made better off without somebody else being made worse off

A Pareto-optimum is said to obtain when nothing more can be given to the hungry, the cold, the ragged and the homeless without incommoding the glutton, the miser, the usurer and the play-boy (John Peet, 1992).



# The Efficient Market Hypothesis

The **Efficient Market Hypothesis** states that a perfectly competitive market will deliver a distribution of goods that is **Pareto efficient**.

The market equilibrium is '*called the point of 'constrained bliss' because it represents the unique organization of production, exchange and distribution that leads to the **maximum attainable social welfare***' (Ferguson, 1969:454).



# What is meant by social welfare?



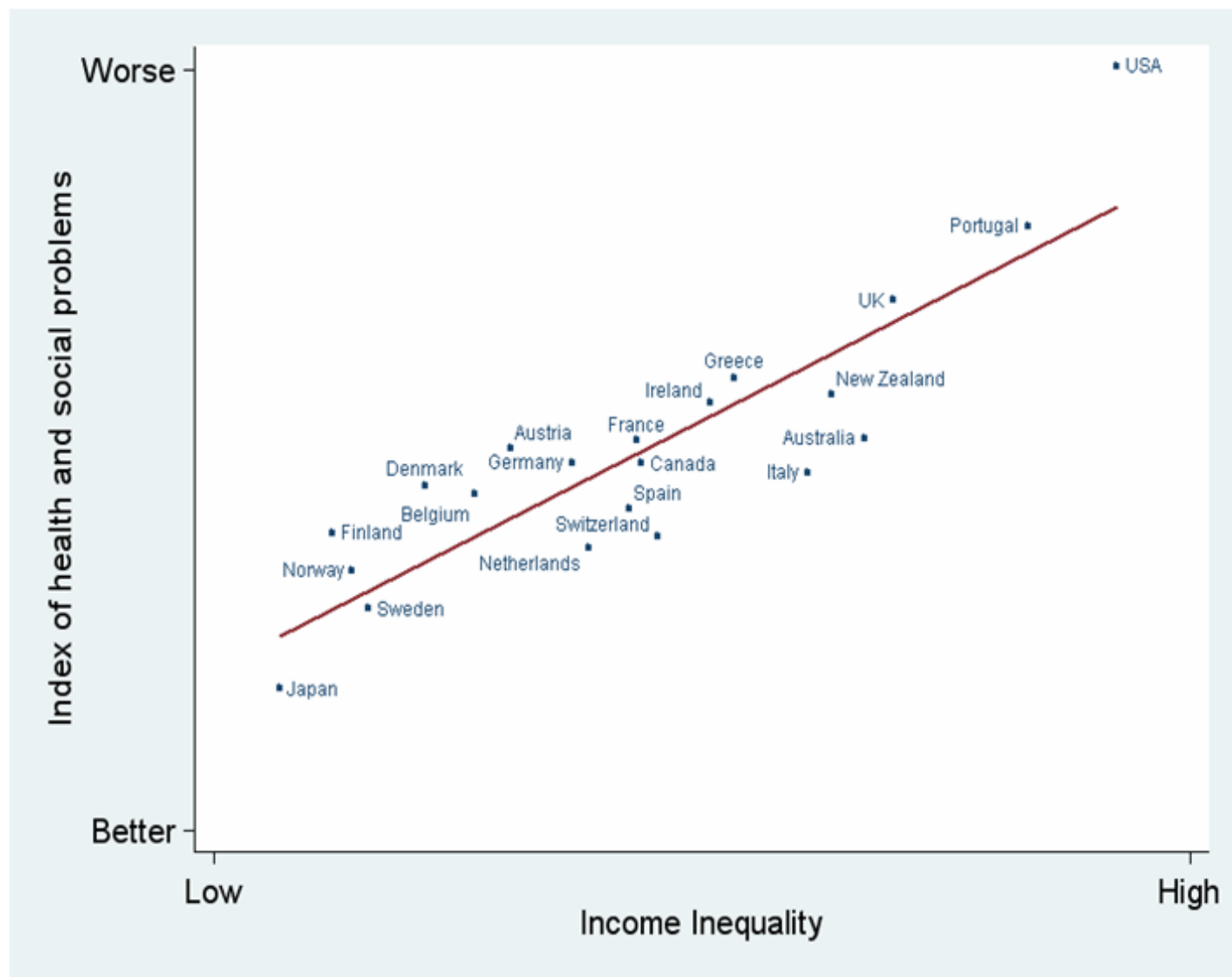
In neoclassical economics...

- Social welfare = the sum of private utility
- Utility = the advantage or fulfillment a person receives from consuming a good or a service
- Utility revealed in people's willingness to pay
  - Both firms and people act 'rationally' and selfishly, weighing the costs and benefits of their consumption choices, in order to maximise their own personal utility
  - All objects of utility have some common characteristic that allows them to be compared (*value monism*)
  - The utility we receive by consuming is not affected by interpersonal comparison

## Health and Social Problems are Worse in More Unequal Countries

### Index of:

- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- Social mobility





# Hang on....

- Social welfare involves much more than satisfying individual consumption preferences!
- a reasonable economic decision for an individual acting in a market setting at a particular point in time might be inappropriate for society as a whole.
  - E.g. Discount rate - like an interest rate used in reverse to calculate the PRESENT value of some future asset.

# Option A

- cut down the entire oak forest
- earn **£100,000** immediately

# Option B

- harvest only 10% of the forest per year
- earn £10,000 every year, over 50 years
- Total = **£500,000**.



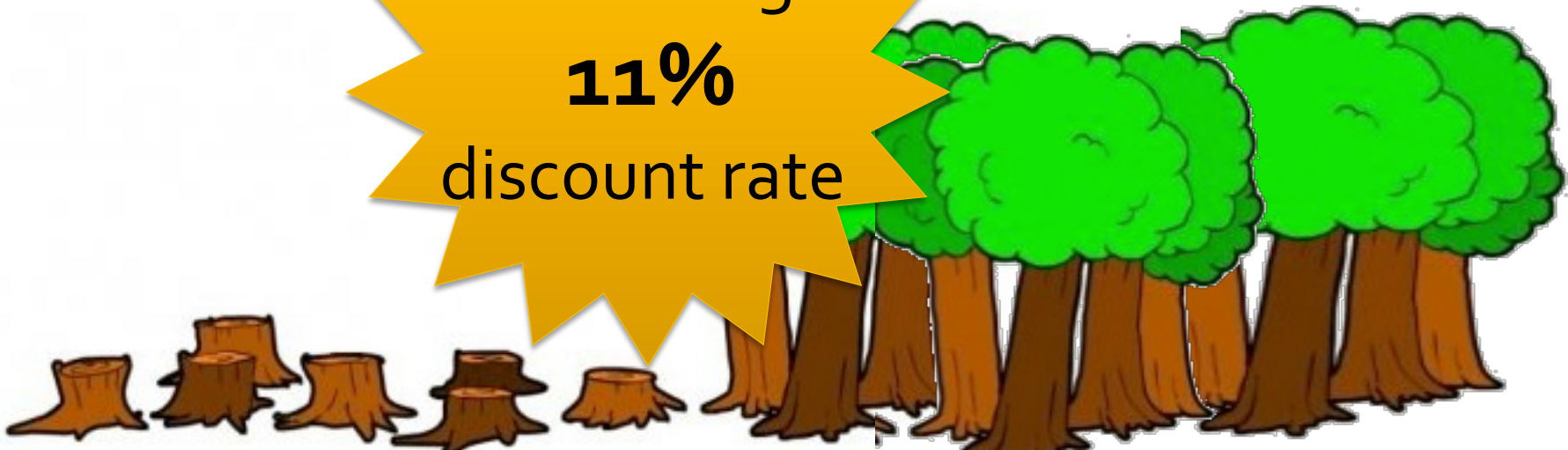
# Option A

- cut down the entire oak forest
- Net Present Value = **£100,000**

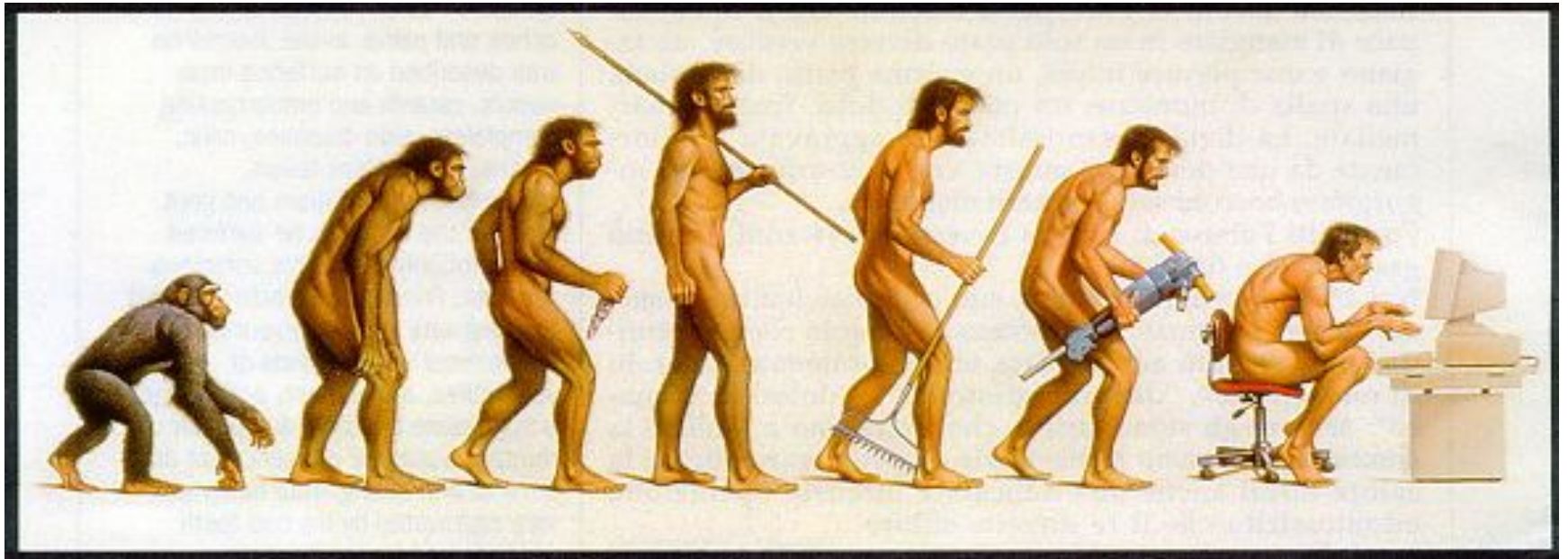
# Option B

- harvest only 10% of the forest per year
- Net Present Value = **£93,010.**

Assuming  
**11%**  
discount rate



- What if the economic institutions themselves alter our ‘preferences’ ?





# Does the structure of our economy affect our 'preferences'?

Marx thought that capitalism 'estranges man from ...nature, from his spiritual essence, his own human essence'

James O'Connor (1998) extends the concept of 'alienation'

Kate Soper (1996) discusses 'commodity fetishism'



'RAT RACE'

# Does the very *idea* of 'homo-economicus' affect us?



- To characterise a choice as 'irrational' is to criticize it, not merely to describe it (Hausman and McPherson, 1993:681).
- Business and economics students behave in a way more self-interested than the rest of us! (Marwell and Ames, 1981; Schneider and Pommerhene, 1981).
- policies designed to appeal purely to self-interest actually 'diminish ethical or other reasons for complying with social norms and contributing to the common good' (Bowles, 2008)
- Efficient functioning of markets depends on moral commitments **such as trust, honesty and goodwill** which may be undermined by the spread of market-based relationships Polanyi (1944), Hirsch (1976) and Hirschman (1985)



# Some further assumptions of the Efficient Market Hypothesis

Consumers and producers must have perfect information including about the future



**Perfect Competition**

no agent should have the power to influence the terms on which trade takes place; no barriers to entry and exit from a market; no economies of scale



production and consumption must only affect those who have chosen to engage in them



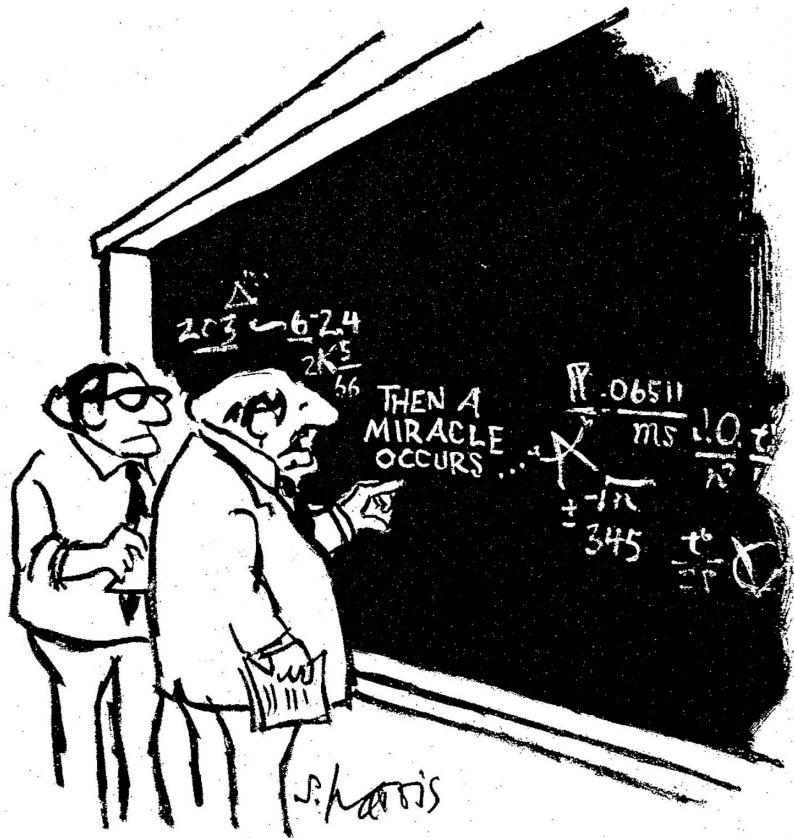
Goods must be purely private: "Rival" and "Excludable"



	<u>Excludable</u>	<u>Non-Excludable</u>
<p><b>Rival</b></p> <p>A good whose consumption by one consumer prevents simultaneous consumption by other consumers</p>	<p><b>Market Good:</b> Food, clothes, cars, land, timber, fish once captured, farmed fish,</p>	<p><b>Open Access Regime: (misnamed: Tragedy of the commons)</b> Oceanic fisheries, timber etc. from unprotected forests, waste absorption capacity of the sea/air</p>
<p><b>Non-rival</b></p> <p>if, for any level of production, the cost of providing it to an additional individual is zero (or close to zero), then a good is non-rival.</p>	<p><b>Potential market good <i>but inefficient</i> (the tragedy of the non-commons!)</b> patented information, streetlights</p>	<p><b>Pure Public Good:</b> climate stability, ozone layer, clean air/water/land, Biodiversity, information, habitat, life support functions, etc.</p>
<p><b>Non-rival, congestible</b></p>	<p>Private beaches, private gardens, toll roads, zoos, movies</p>	<p>Public beaches, gardens, roads, etc.</p>



# The conditions described by the Efficient Market Hypothesis do not exist anywhere.



"I THINK YOU SHOULD BE MORE EXPLICIT HERE IN STEP TWO."

But neo-classical economists argued that the perfectly competitive market is not a description of reality, but a **benchmark** against which to appraise actual markets.

The idea prevails that '**market failure**' is the exception to the rule, and can be corrected by government intervention – e.g. expanding the market or taxing '**externalities**'.

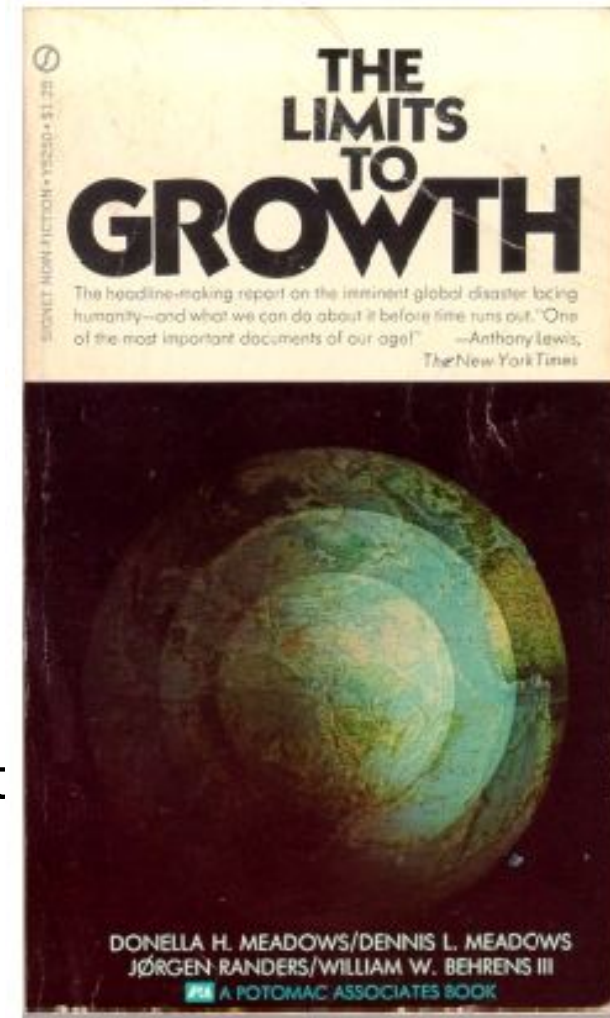
# Neo-classical economists tend to be complacent about resource limits

- The market will sort it out!
- If prices reflect value, as resources get more scarce, they will get more expensive, and the search will begin for substitutes.
- Externalities are seen as the exception to the rule – and something that can be ‘corrected’
- Uncertainty is played down
- Changes at the margin are linear

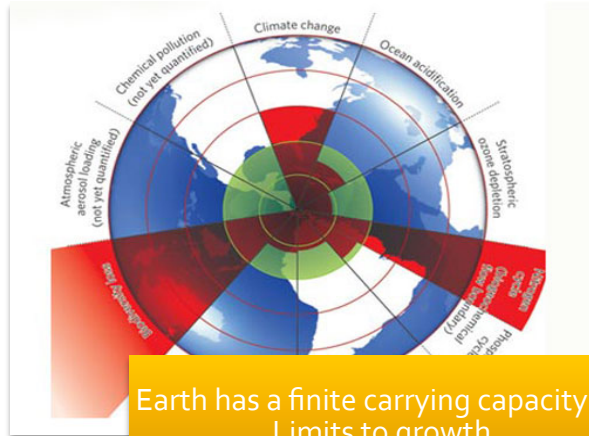
# Ecological Economics emerged as a response to this complacency

Formally established in 80s, but founded on:

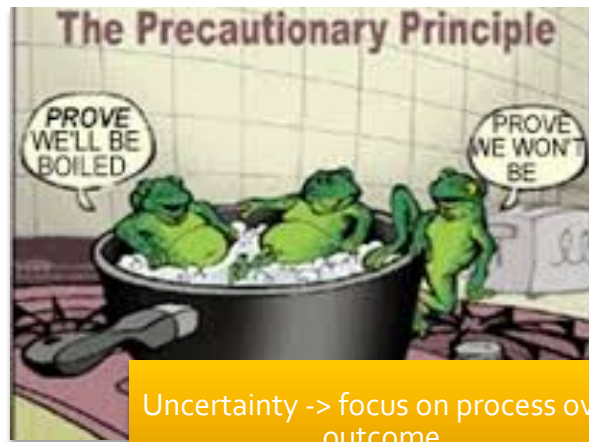
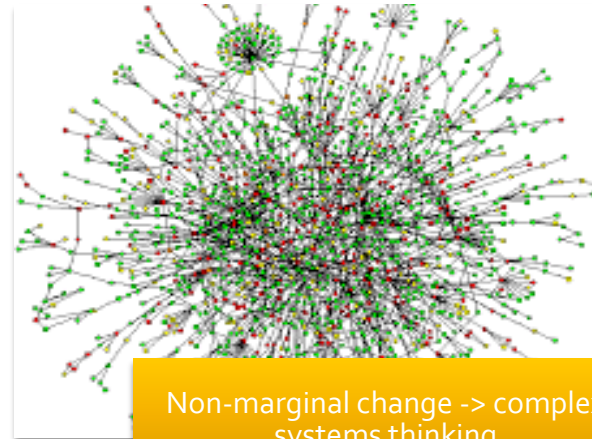
- Concerns in 1960s and 70s about limits to growth (e.g. Boulding 1966; Meadows et al., 1972)
- Study of the flow of energy and materials in the economy based on the work of Georgescu-Roegen (1971)
- Observation that environmental externalities are pervasive – prices don't reflect values (Kapp, 1950).
- Drew heavily from natural sciences



# Ecological Economists call for recognition that:



Earth has a finite carrying capacity - >  
Limits to growth



Uncertainty -> focus on process over outcome



# Introductory reading

- Clive Spash (1999), **The Development of Environmental Thinking in Economics**, *Environmental Values* 8: 413–435
- John Gowdy and Jon D. Erickson (2005), **The approach of ecological economics**. *Cambridge Journal of Economics* 29: 207–222
- Molly Scott Cato (2012). **Green economics: putting the planet and politics back into economics**. *Cambridge Journal of Economics* 36: 1033–1049
- Clive Spash (2012). **New foundations for ecological economics**. *Ecological Economics* 77: 36–47