

A philosophical critique of the limitations of Cost--Benefit Analysis in environmental economics and health policy.

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“What is a **cynic**? A man who knows the price of everything and the value of nothing. And a **sentimentalist**, my dear Darlington, is a man who sees an absurd value in everything, and doesn't know the market price of any single thing.”

— [Oscar Wilde, *Lady Windermere's Fan*](#)

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A. Abstract

Cost-benefit analysis is a widely used method in politics and economics as an assisting tool for decision making and project evaluation. This method is of great assistance to maximize the net--utility or well being of society, by choosing the option of maximum net--benefits and minimum net--costs, as it is heavily based on an utilitarian framework. The ethical limitations of this method become apparent in **areas of environmental, safety and health regulations**, in which case, there may be many instances where a certain decision might be right even though its benefits do not outweigh its costs. There are good reasons to oppose efforts to put dollar values on non--marketed benefits and costs as for instances, human life or human rights are not traded in the market.

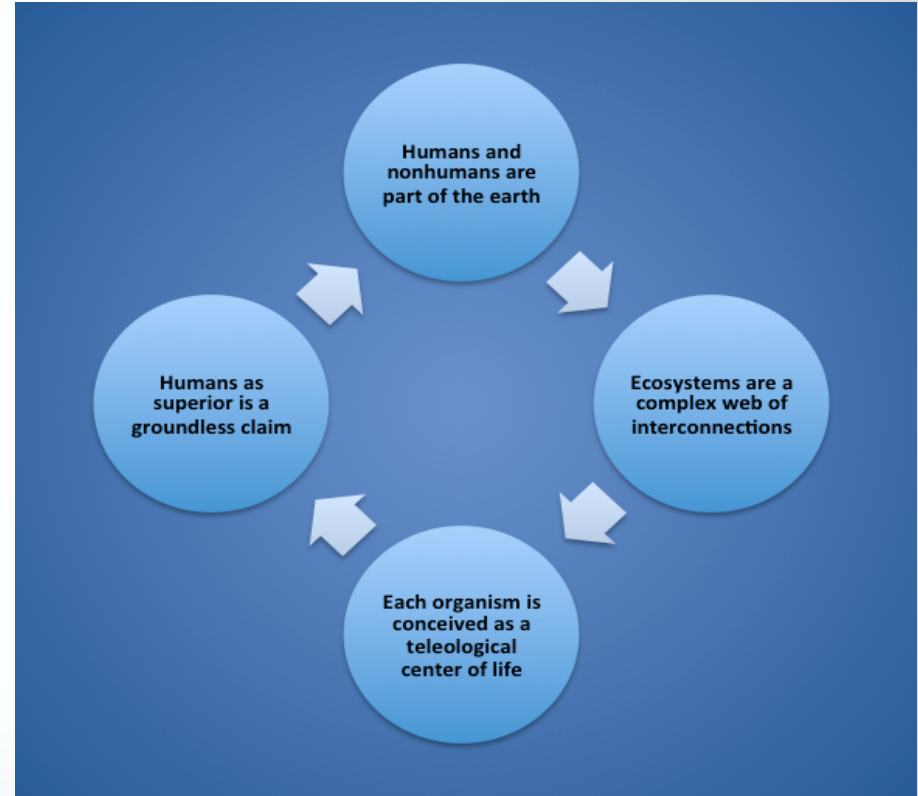
Biocentrism vs Ethnocentrism

B. Biocentrism vs Ethnocentrism

Example of a wall:



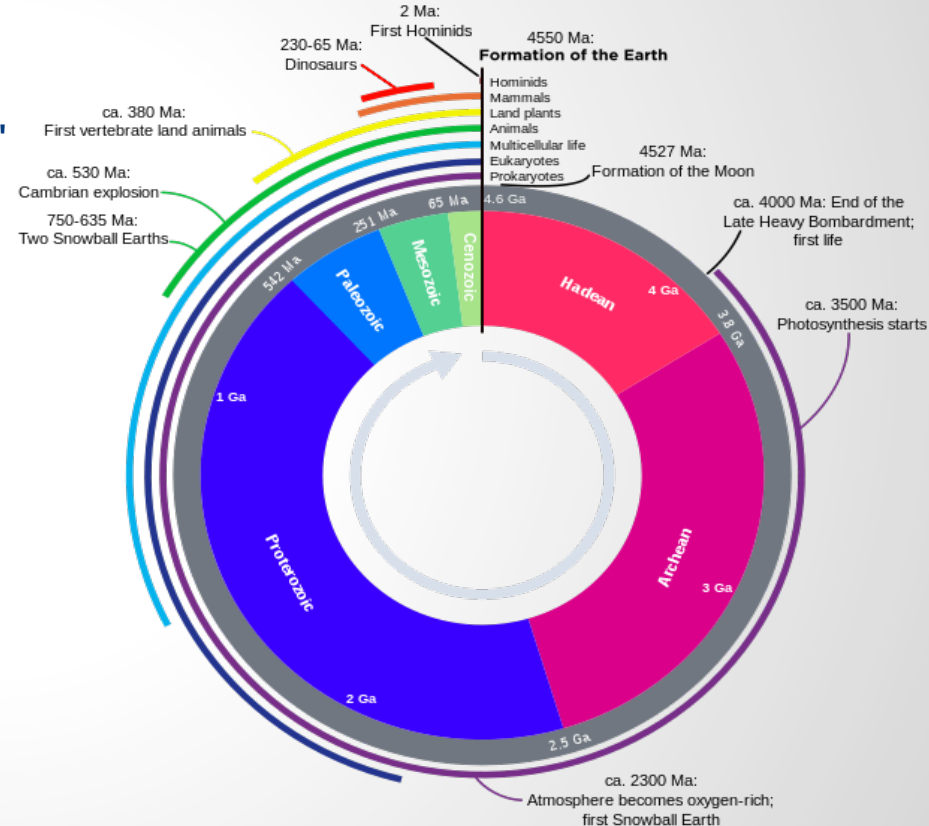
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B. Biocentrism vs Ethnocentrism

★ PAUL W. TAYLOR

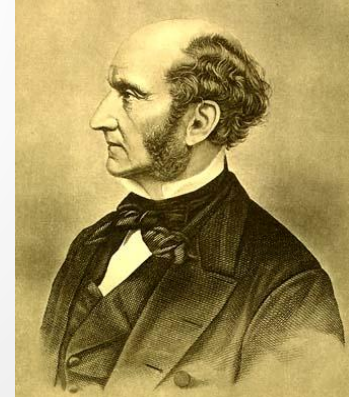
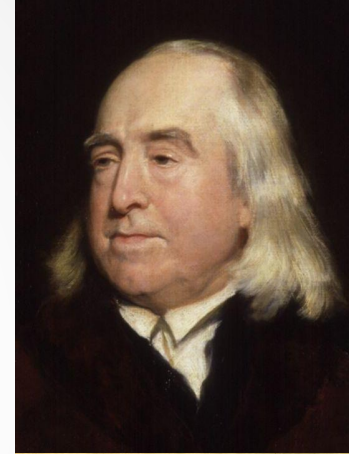
- "ETHICS OF RESPECT OF NATURE"



a. Utilitarianism - CBA

- ★ In 1780, Jeremy Bentham published his work '*Principles of Morals and Legislations*'
 - 'By utility is meant that property in any object, whereby it tends to **produce benefit**, advantage, pleasure, good, or happiness [...] to **prevent** the happening of mischief, pain, evil, or unhappiness to the party whose interest is considered' (Justiceharvard, 1780).

- ★ In 1863, John Stuart Mill
 - 'I must again repeat [...] that the happiness which forms the utilitarian standard of what is right in conduct, is not the agent's own happiness, but that of **all concerned**. As between his own happiness and that of others, utilitarianism requires him to be as **strictly impartial** as a disinterested and benevolent spectator. In the golden rule of Jesus of Nazareth, we read the complete spirit of the ethics of utility. To do as one would be done by, and to love one's neighbor as oneself, constitute the ideal perfection of utilitarian morality' (John Stuart Mill, 1863).



Limitations of Cost-benefit

Utilitarian framework

Externalities

Contingent Valuation Methods

WTP

WTA

Total Economic Value

C. Limitations of Cost-benefit

Kelman: Utilitarian framework

- ★ CBA ‘insufficient as a moral view’
- ★ Some actions are right even if costs are higher
 - Second World War Example
- ★ The Areas of safety and health regulations
- ★ workers right to a safe workplace

Keat: Market failure

- ★ Inefficiencies result in environmental, safety and health externalities
- ★ Narrow vs Broad externalities
 - (to include intangibles)
 - eg.Polluted river

C. Limitations of Cost-benefit

Brown: CVM

- ★ Valuing something that people might not experience in their lifetime
 - eg. Alaska 'Exxon Valdez'
 - individ. higher levels of wtp for environment
- ★ Four chief Bias in WTP
 - information
 - strategic
 - hypothetical
 - starting point
- ★ bias against children and elderly

Sagoff: CVM

- ★ CVs reflect peoples preferences not beliefs about their own benefits
- ★ participants asked to comment without opportunity of thought
- ★ WTP Existence value = judgement value, not fact
- ★ CV created to measure benefits of existence of environment

C. Limitations of Cost-benefit

Keat: CVM

- ★ Radical Error: CVM tries to bring out answers related to value from WTP/WTA methods
 - Eg. person on trial guilty, by preference from the jury
 - ★ Statements about their individual preferences
 - ★ treating judgements as if they were preferences
- “the reasons people give for their views... are not to be counted; what counts is how much individuals will pay to satisfy their wants. ’

- ★ “the **credibility of a belief** (e.g. that the earth is round) depends on evidence and expert opinion, not the amount of people are willing to bet that it is true.”
- ★ “Thus cost-benefit techniques, when they go **beyond the confines of determining efficiency** in the narrow sense, do not provide useful information. Rather, they confuse preference with ethical and factual judgement’ ’

C. Limitations of Cost-benefit

Sagoff: Income vs Wellbeing

- ★ **First premise**: 'to allocate resources in order to maximize welfare or well-being'
- ★ **Second premise**: 'individuals are better off [...] insofar as their preferences, measured or ranked by WTP are satisfied'
 - connects WTP with well being
 - the more you acquire WTP, the better off you are.

- ★ are people happier when they can buy more?
 - Income = ability to buy goods one wants
 - Wellbeing = Happiness
 - After 'basic needs' are covered, no correlation between income and wellbeing rising
 - Money doesn't buy happiness

'Happiness seems to develop on the things that money cannot buy - love, friendship, and faith - not on the extent of one's possessions'

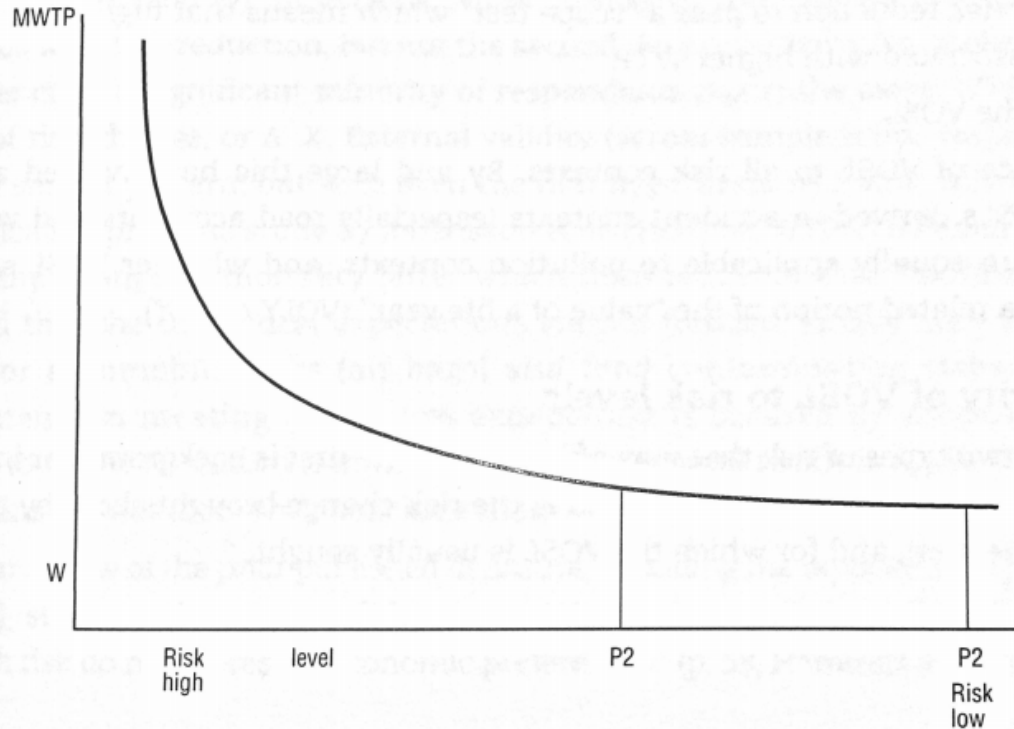
Valuing health and life risks

D. Valuing health and life risks

- ★ Importance of health effects on CBA
 - Environmental policy affects human health
 - reducing environmental risk to our lives
 - improve health of those living with disease
 - improve mental health

D. Valuing health and life risks

Figure 14.1. Risk and willingness to pay



Multi-criteria analysis

E. Possible Alternative - MCA

Multi-criteria analysis Advantages:

★ Point System

- ★ Specifically identifies **trade-offs** that might otherwise be implicit
- ★ Is able to take into account the **distribution of costs** and benefits amongst the population unlike a standard cba
- ★ Systematic and comprehensive structure for problem analysis
- ★ Rationalizes problems with number of components beyond the ability of the human brain to process conventionally
- ★ Flexible data requirements, incorporating quantitative and qualitative data
- ★ Through sensitivity analysis, enables exploration of alternatives and robustness of final solutions
- ★ Identifies where further data are required
- ★ Can offer decision support through various scenarios or single solutions

E. Possible Alternative - MCA

Multi-criteria analysis Disadvantages:

- ★ Still compares what may be considered **incommensurable properties**
- ★ **Complexity of analysis** process can lead to mistrust or excessive faith
- ★ **Explicit weights** can be falsely objective if other weights are still implicitly present
- ★ Offers many alternative analysis approaches without a clearly superior one
- ★ Requires considerable efforts if done properly

F. Conclusions

- ★ Try to integrate more Biocentrism maybe to CBA
- ★ Become aware of the limitations of CBA as well as the trade offs, as they might have an ethical dimension



THANK YOU
FOR
YOUR ATTENTION

Bibliography

- ★ Biocentrism: PAUL W. TAYLOR "ETHICS OF RESPECT OF NATURE"
- ★ Justiceharvard1780:
<http://www.justiceharvard.org/resources/jeremy-bentham-principles-of-morals-and-legislation-1780/> (last accessed 5/March/2014)
- ★ Justiceharvard1780:
<http://www.justiceharvard.org/resources/jeremy-bentham-principles-of-morals-and-legislation-1780/> (last accessed 5/March/2014)

Bibliography

- ★ Sagoff, 1998. Aggregation and deliberation in valuing environmental public goods: a look beyond contingent pricing, Institute of philosophy and policy, university of Maryland, USA.
- ★ Brown Journal of Environmental Economics, Economic Analyses of issues and markets. Eastern connecticut state university.
- ★ Keat, 1997. Values and preferences in neoclassical environmental economics, in: 1. Foster (Ed.) Valuing Nature? Ethics, Economics and the Environment (London: Routledge). pp. 32-47.
- ★ Kelman, 1981. "Cost-Benefit Analysis: An Ethical Critique." by Steven Kelman, from *AEI Journal on Government and Society Regulation* (January/February 1981) PP. 33—40.
- ★ Pearce et al. 2006. David Pearce, Giles Atkinson, Susana Mourato, 2006. Cost-Benefit Analysis and the Environment. OECD Publishing, rue des Grands-Augustins, 75006 Paris, France.