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# The Ethics of the Stern Review on The Economics of Climate Change

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# Outline

- Context: Global warming
- Stern Review ethics revisited
- The Global Deal
- Ethical Issues
- The role of individual action and norms
- Religion's role
- Business and Values

# The Stern Review (2006)

- Costs of climate change: rising to 5% of world GDP
- Cost of mitigation: c.1% of world GDP
- Assumed discount rate: 1.4% p.a.
  
- Implies Social CBA has positive NPV.
  
- Also, argued for immediate action.

# The Ethics of the Stern Review

- Importance of Social Discount Rate (SDR)
- Formally:  $SDR = p + eg$
- $p$  = rate of pure time preference
- $e$  = inequality parameter
- $g$  = growth rate of consumption per head
- Stern Review set  $SDR = 0.1 + 1 \times 1.3 = 1.4\%$
- Earlier studies set  $SDR = 2 + 2 \times 2 = 6\%$

# Ethics of Stern Review

- Low value of rate of pure time preference implies we care about future a lot (low catastrophe risk)
- Low value of inequality parameter (implies we don't care about inequality of incomes that much (though we do care somewhat))
- Low value of growth rate assumes growth rate slower than recently, especially in developing countries.
- Implication we are happy to transfer to consumption to richer future generations and don't care that much about doing things about current inequality.

# 'Ethical' Critiques of Stern

- Miscalculation of SDR:
  - Discount rate too low (Nordhaus)
  - Elements inconsistent (Dasgupta)
  - SDR itself not adjusted for uncertainty (Weitzman)
- Alarmist
  - Systematically biased in presentation of scientific evidence (Carter et al)
  - Systematically biased in presentation of costs of climate change (assume high end) and costs of mitigation (assume low end) (Byatt et al)
- Assumes substitutability of financial and natural capital
  - Better to assume non-substitutability (Neumayer)
- True cost to developed countries much higher
  - 1.8% of GDP if they pay most of cost (Dasgupta)
  - x2 assuming optimism bias
  - x2 assuming inefficiency of response

# Stern's defence (AER, 2008)

- Need to include uncertainty (lowers SDR)
- RPTP and inequality parameter important
- Components of SDR are supportable
- Easy to justify 1.5-5% range for SDR now
  
- Need to address values directly – standard market economics not enough (Hepburn et al.)

# Elements of a Global Deal

## Targets and Trade:

- 50 percent cuts in world emissions by 2050 with rich country cuts at least 75 percent.
- Rich country reductions and trading schemes designed to be open to trade with other countries, including developing countries.
- Supply side from developing countries simplified to allow much bigger markets for emissions reductions: “carbon flows” to rise to \$50–\$100 billion per annum by 2030. Role of sectoral or technological benchmarking in “one-sided” trading to give reformed and much bigger CDM market.

## Funding Issues:

- Strong initiatives, with public funding, on deforestation to prepare for inclusion in trading. For \$10–15 billion per annum could have a programme which might halve deforestation. Importance of global action and involvement of IFIs.
- Demonstration and sharing of technologies: e.g., \$5 billion per annum commitment to feed-in tariffs for CCS coal could lead to 301 new commercial size plants in the next 7–8 years.
- Rich countries to deliver on Monterrey and Gleneagles commitments on ODA in context of extra costs of development arising from climate change: potential extra cost of development with climate change upward of \$80 billion per annum. (Stern, 2008, p.31)



# Ethical issues remaining

- Carbon reduction Burden sharing:
- Cumulative emissions to date? Equal cumulative total?
- Equal final target per capita target? US needs 90% cut in CO2 by 2050

# Society filters information

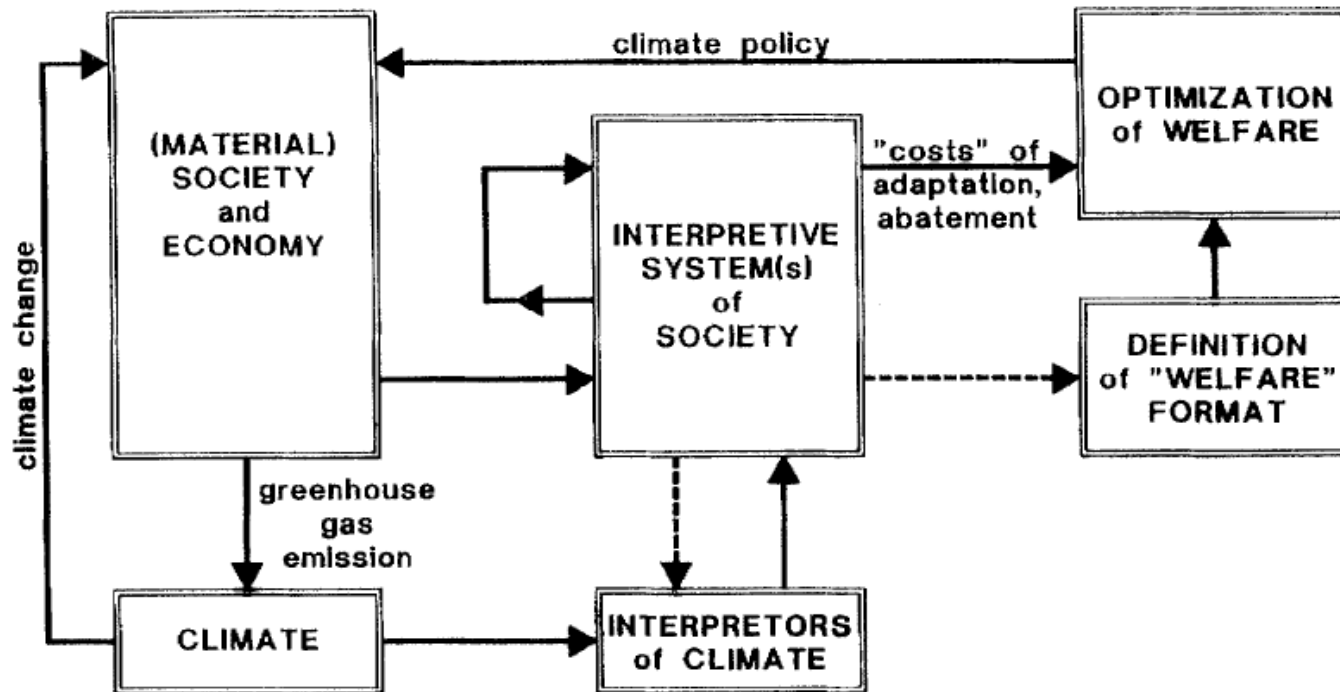


Figure 4. The Perceived Environment and Society (PES) model, which deviates from the GES model in Figure 2 by two additional boxes representing societal processes.

# Role of individual values

- Tjernstrom and Tietenberg (2008):
- International Social Survey Program 2000 data
- 8000+ respondents, 26 countries
- Individual values shaped by education, urbanisation, affinity
- National emissions reductions increase:
  - Higher percentage individuals think climate change important
  - Higher press freedom
  - Higher trust in government (Stehr)
- Authors conclude ‘what citizens believe does matter’.

# Individual Action is Important

TABLE 2: ESTIMATED RANGE OF EMISSIONS REDUCTIONS

| Measure  | Low* | High* |
|--|------|-------|
| 1. Reduce Idling   | 6    | 9     |
| 2. Reduce Standby Power  | 16   | 22    |
| 3. CFL Substitution  | 12   | 37    |
| 4. Two Degree Temperature Change   | 18   | 36    |
| 5. Water Heater Temperature Changes  | 28   | 39    |
| 6. Tire Pressure Maintenance   | 12   | 12    |
| 7. Auto Air Filter Changes   | 19   | 27    |
| Totals   | 111  | 182   |
| *Numbers are in millions of tons CO <sub>2</sub> , rounded to the nearest million. |      |       |

Even after assuming limited uptake, this is still 7% of US carbon emissions.

Source: Vandenbergh et al., 2008, p.1750.

# How do we get individuals to respond (Vandenbergh)

- Regulation unlikely to work
- Distributional problems with pricing
- Need to appeal to moral imperative
- Need 'norm' activation
- A sense of duty in the absence of sanctions
  
- Norms: 'environmental protection', 'personal responsibility' and 'reciprocity'

# Where do norms come from?

- We need to turn to 'norm' specialists.
- Religious institutions activate norms: e.g. civil rights movement, environmental justice movement, third world debt relief movement
- For example: almost all major Christian denominations in the US have expressed strong support for sustainable development and de-carbonisation.

# Is religion good for the environment?

- Lynn White (1967) drew attention to the 'creation ordinance' in Genesis 1:28 as a justification for exploitation of the natural world.
- However in reality role of religion mixed. Sustainable development movement traces its intellectual origins back to the Christian philosopher: Rev. Thomas Malthus.
- Evidence on impact of religion on attitudes to environment mildly positive (for 1993), though education much stronger effect.

# Religious texts on the Environment

‘The heavens declare the glory of God; **the skies proclaim the work of his hands.** Day after day they pour forth speech or language where their voice is not heard. Their voice goes out into all the earth, their words to the ends of the earth.’

*Psalm 19: 1-4*

‘The creation waits in eager expectation for the sons of God to be revealed. For the creation was subjected to frustration, not by its own choice, but by the will of the one who subjected it, in hope that **the creation itself will be liberated from its bondage to decay** and brought into the glorious freedom of the children of God.’

*Romans 8: 19-21*

‘The sun and the moon to a reckoning, and the stars and trees bow themselves; and heaven – He raised it up and set the balance. **Transgress not in the balance, and weigh with justice, and skimp not in the balance.**’

*Sura: 55:5-9*



# The challenge

(see Sandelands and Hoffman, 2008)

- Environmental sustainability is only part of true sustainability
- Economic SCBAs will not motivate people
- What is needed is an appeal to ‘a hunger for meaning’
- The Stern project will fail because it is an economic one, based on one sustainability problem out of many, which is a priority for us but not the developing world.
- ‘Only a fundamental change in human character from a preponderance of the having mode to the predominantly being mode of existence can save us’ (Fromm, 1977)
- Need cooperation based on a politics of hope rather than fear.

# What does this mean for companies?

- Companies can help or hinder the accumulation of institutional, relational, moral and spiritual capital (Heslam, Jones and Pollitt)
- All of these will be needed to address issues of environmental sustainability.

# Company responses

- Institutional capital
  - Emissions trading schemes, standards, environmental law enforcement will be facts of life
  - Implies compliance and responsible lobbying
- Relational capital
  - World will be increasingly post-materialist / norm activated
  - Responding to customer / employee concerns key

# Company responses

- Moral capital
  - Companies will need to have values and set examples which actively promote environmental sustainability
  - Integrity, consistency and transparency of actions will be central, particularly for MNCs
- ‘Spiritual’ capital
  - Society will/should increasingly recognise this as central to its survival
  - Companies need an inspiring vision about why the company exists and what drives it, *other than* the quest for profit.

# Conclusions

- The economic case for early decarbonisation is highly debateable.
- The moral case for environmental sustainability and justice is overwhelming.
- The costs of decarbonisation will be substantial and involve a significant political cost.
- Our current vision for action, focused on de-carbonisation, is too narrow and self-interested.
- We need to seriously engage with the ethics, morality and religion in tackling environmental issues.
- If we do not there is no chance we will meet our targets.

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