# Climate Change: What Are We Arguing About?

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**22 November 2010**

**Annual Gordon Manley Lecture**

**Department of Geography, Royal Holloway University of London**

*The threat from climate change is serious, it is urgent and it is growing … we will be judge by history*

*Climate change is one of those things you think about for a few minutes, get depressed and then move on to the next thing*

# Do you recognise these voices?

*I think that the scientific debate has now closed on global warming, and the popular debate is closing as well*

*If you could vote for a change of climate, you would always vote for a warmer one*

*The global nation states must take action. If not, we'll be calling it climatic genocide*

# What scientists have concluded ...

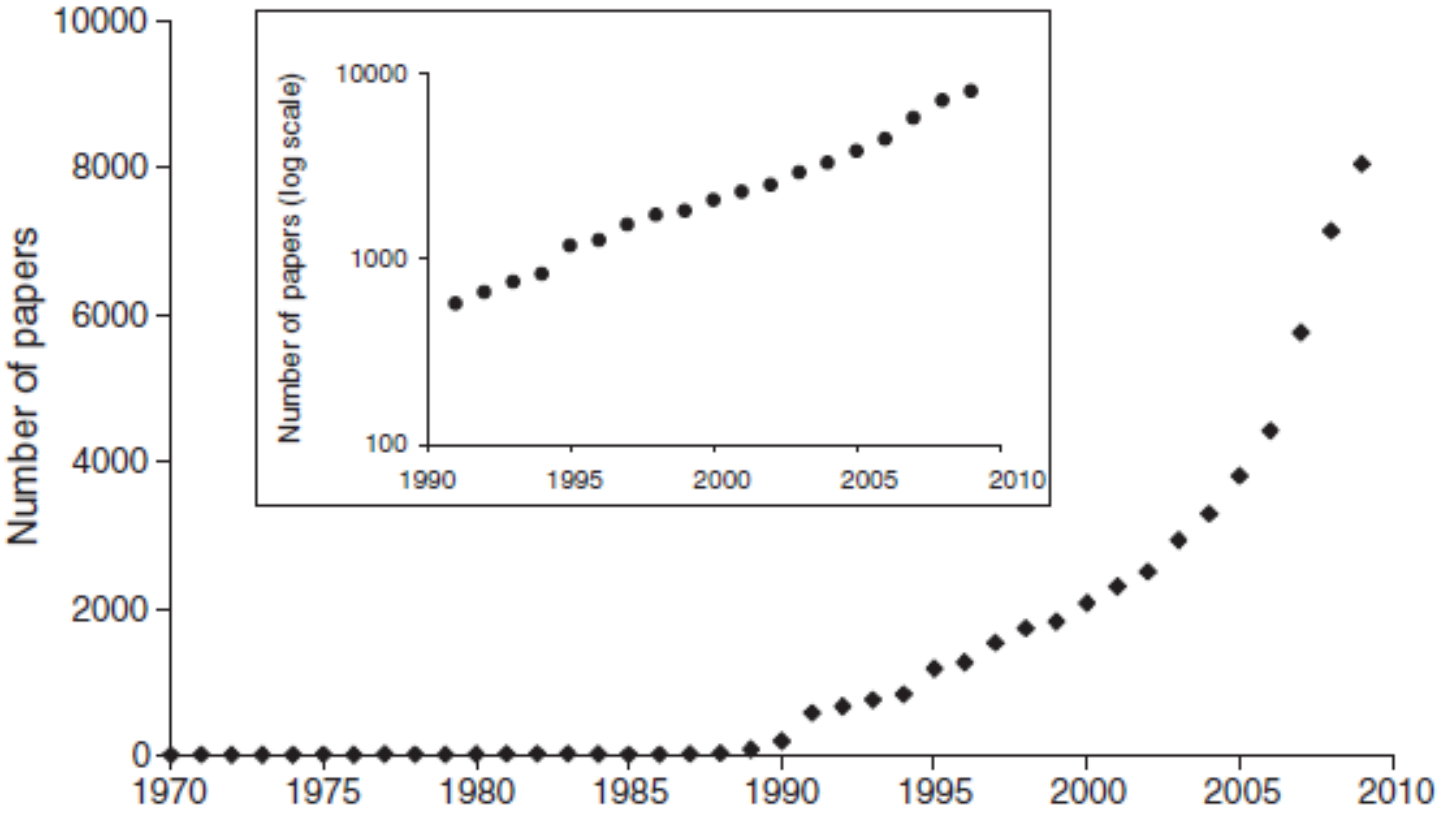
**1990** ... *'Global temperature has increased by between 0.3º and 0.6ºC over the last hundred years … this warming is broadly consistent with predictions of climate models, but it is also of the same magnitude as natural climate variability.'*

**1996** ... *'The balance of evidence suggests that there is a discernible human influence on global climate'*

**2001** ... *'Most of the observed warming over the last fifty years is likely to have been due to the increase in greenhouse gas emissions'*

**2007** ... *'Most of the observed increase in global average temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.'*

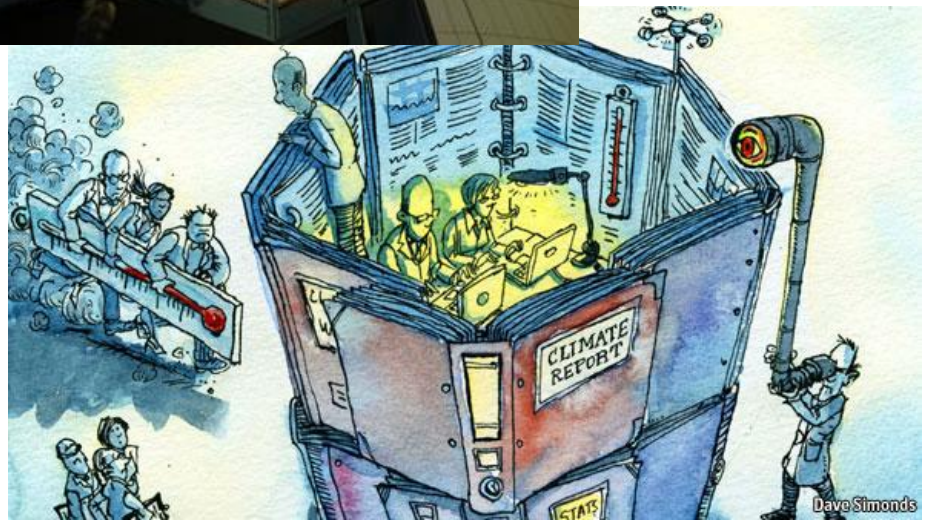
# How knowledge has grown ...




**Number of papers with 'climate change' in article keywords or abstract in ISI Web of Science**

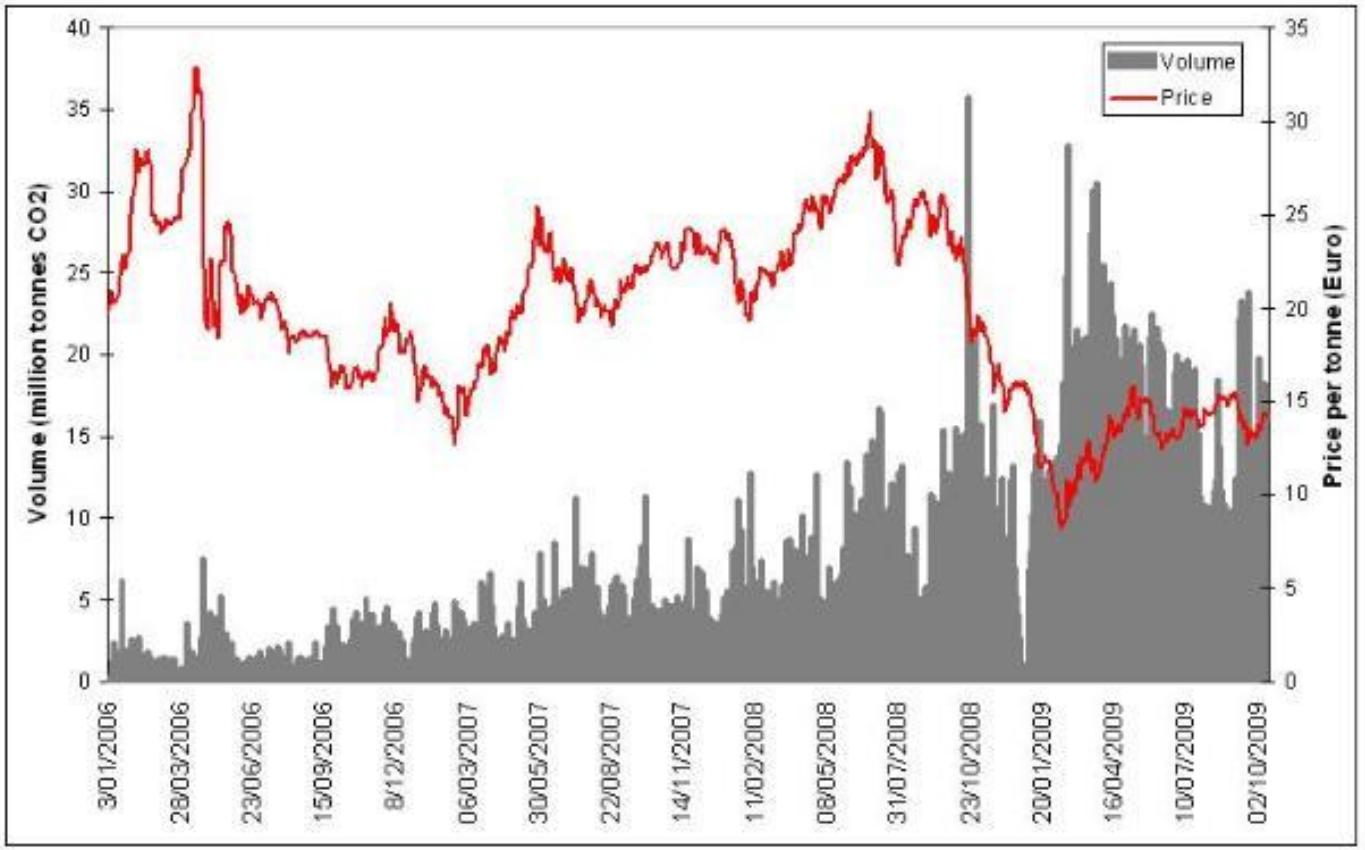
**Source: Aspinall,R. 2010**

# And led to controversy ...

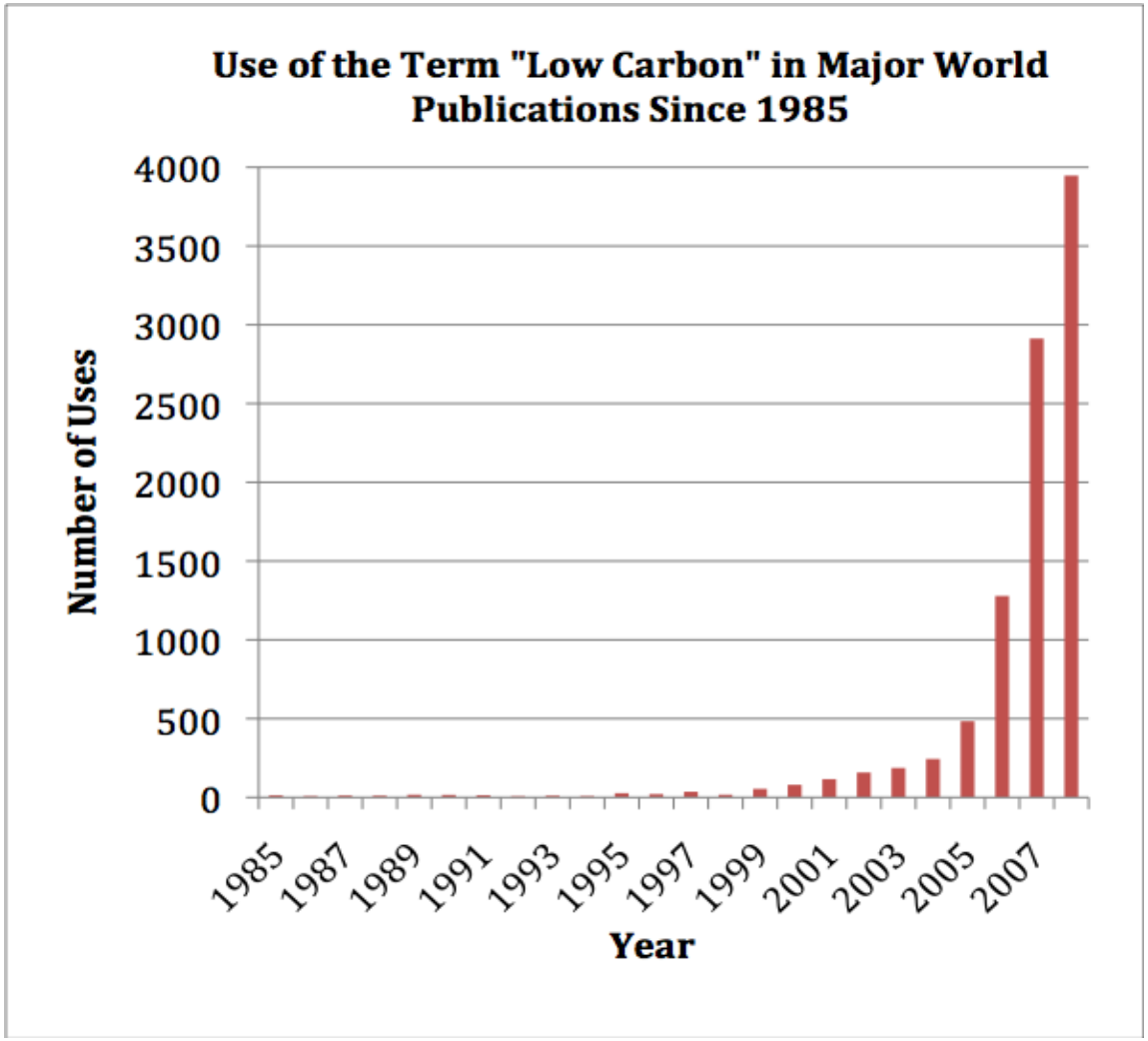



ipcc
INTERGOVERNMENTAL PANEL ON climate change
WMO UNEP

# How the carbon markets have performed ...

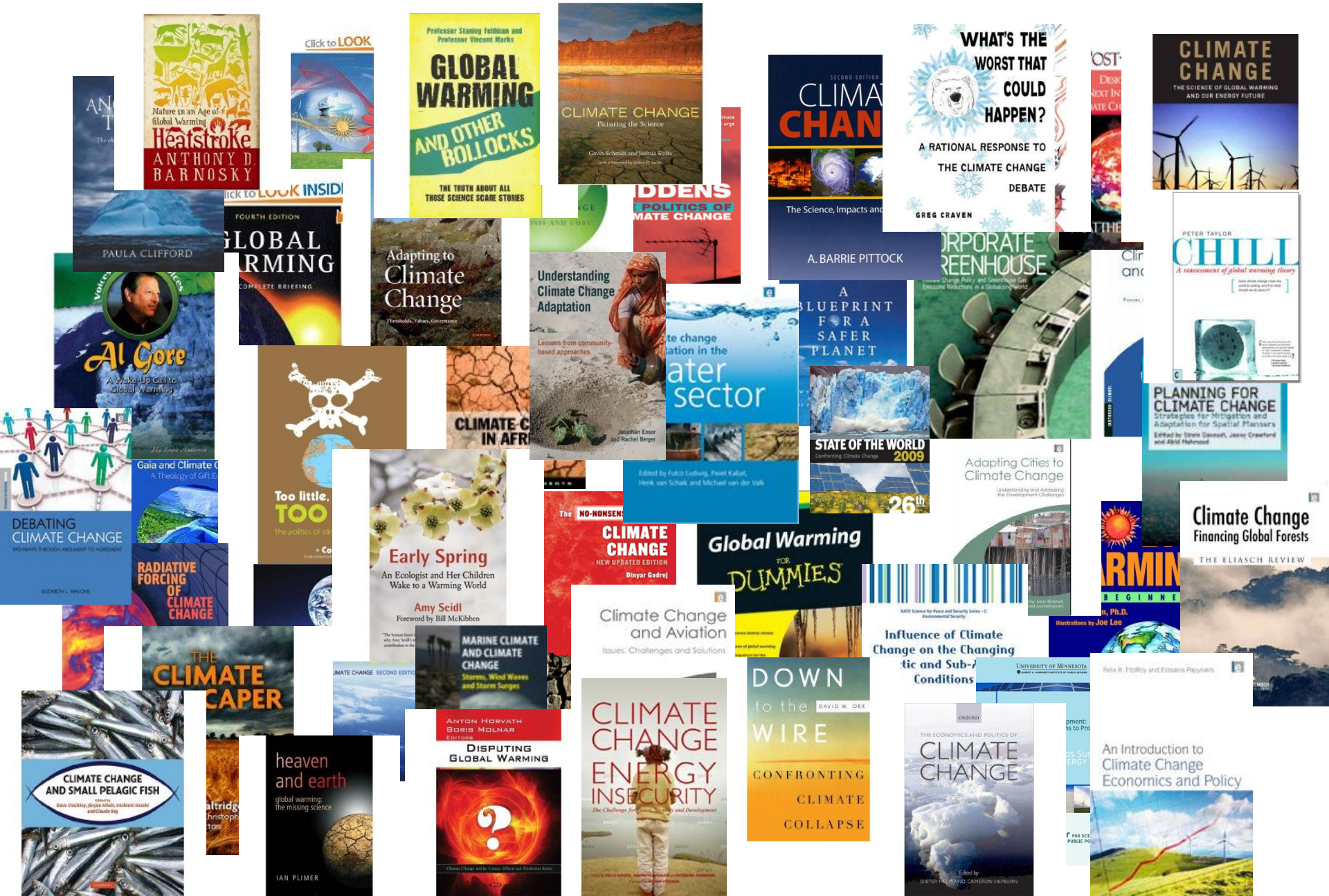


# How language has changed ...



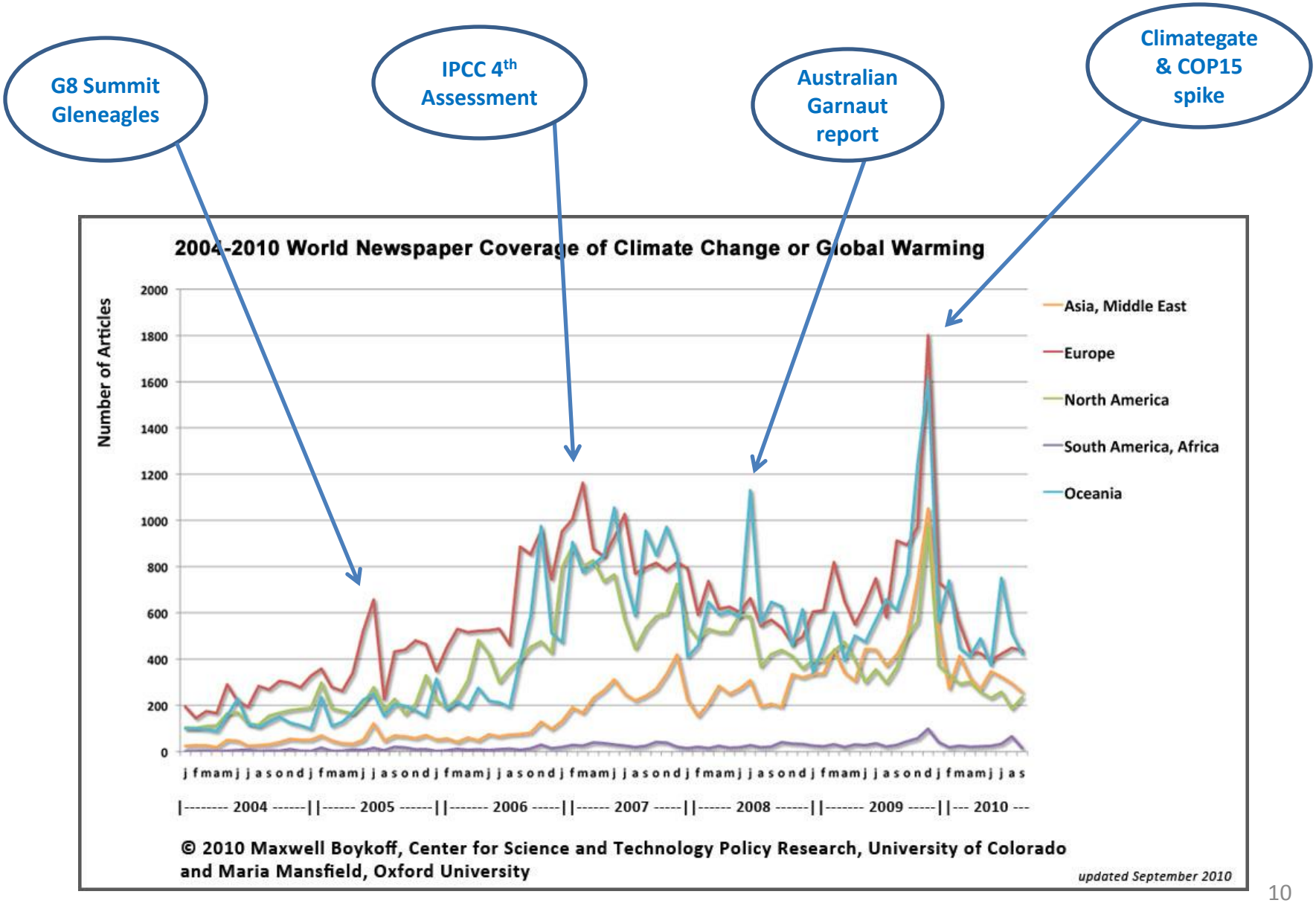

**Source: Brigitte Nerlich, University of Nottingham**

# How climate change has been written...



# How religions have responded ...

# How the media have reported ...



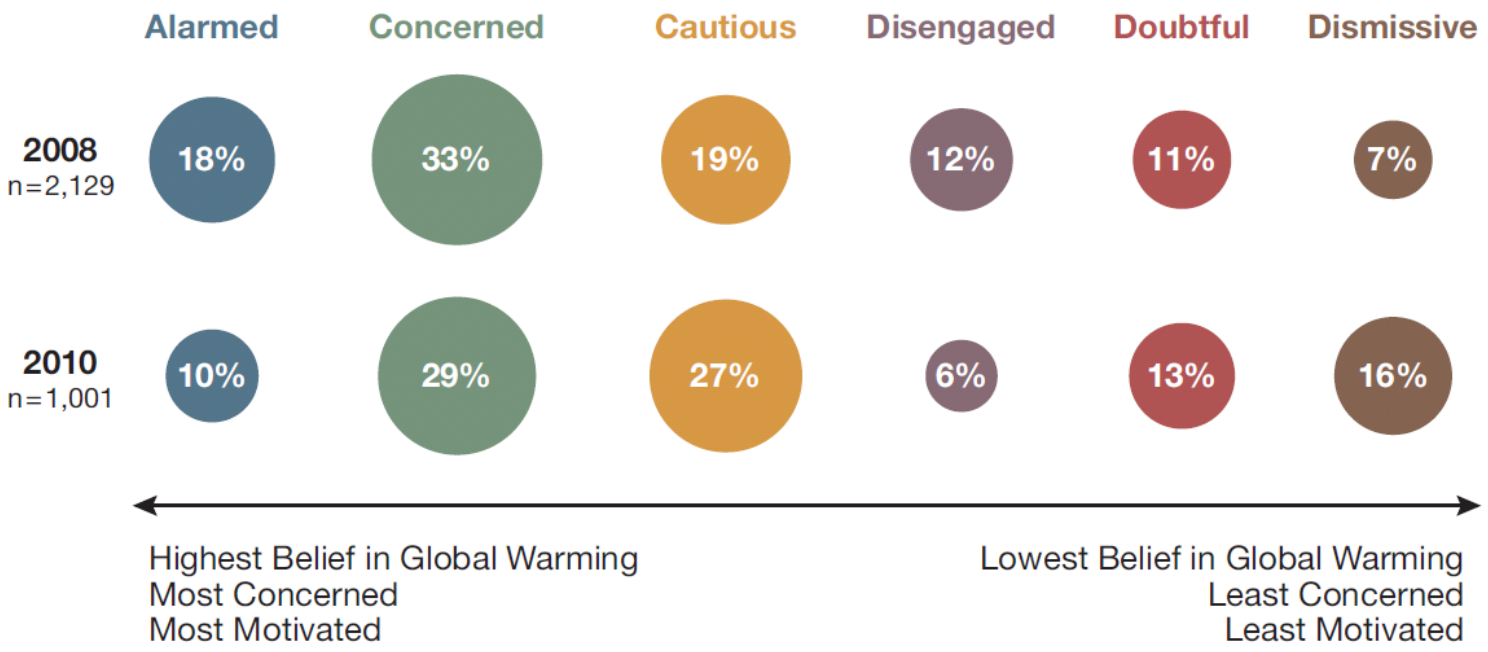
# How the public have thought ...

From 51% to 39%

From 18% to 29%

**e 1:** Proportion of the U.S. adult population in the Six Amer
2008 and 2010

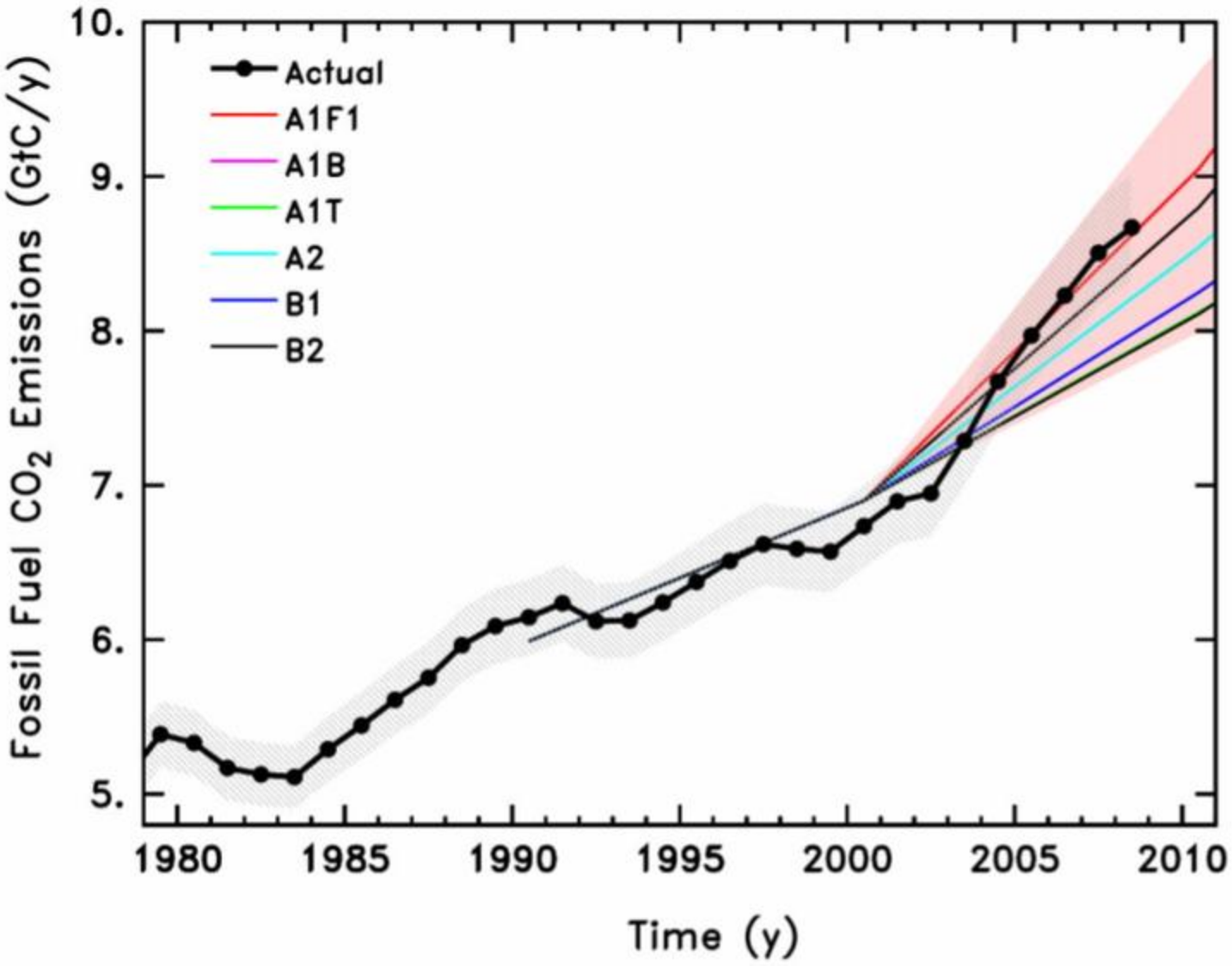
*Proportion represented by area*

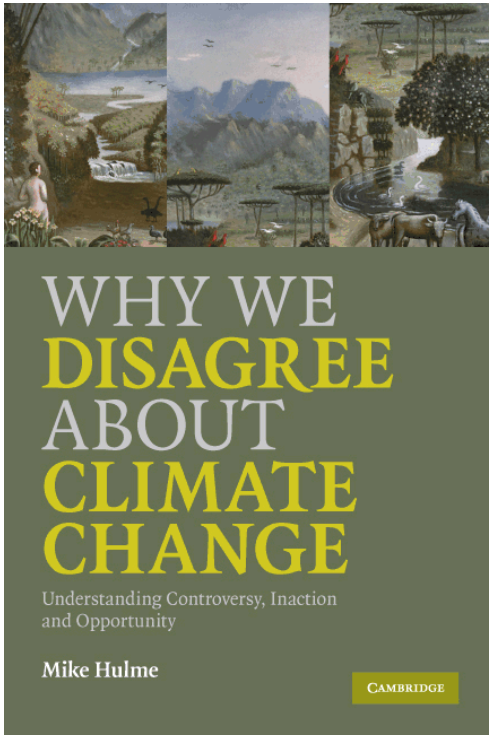



**Source: Tony Leiserowitz, 2010, Yale**

# From Berlin to Cancun (via ...)

# How carbon emissions have risen ...






**My two questions ....**

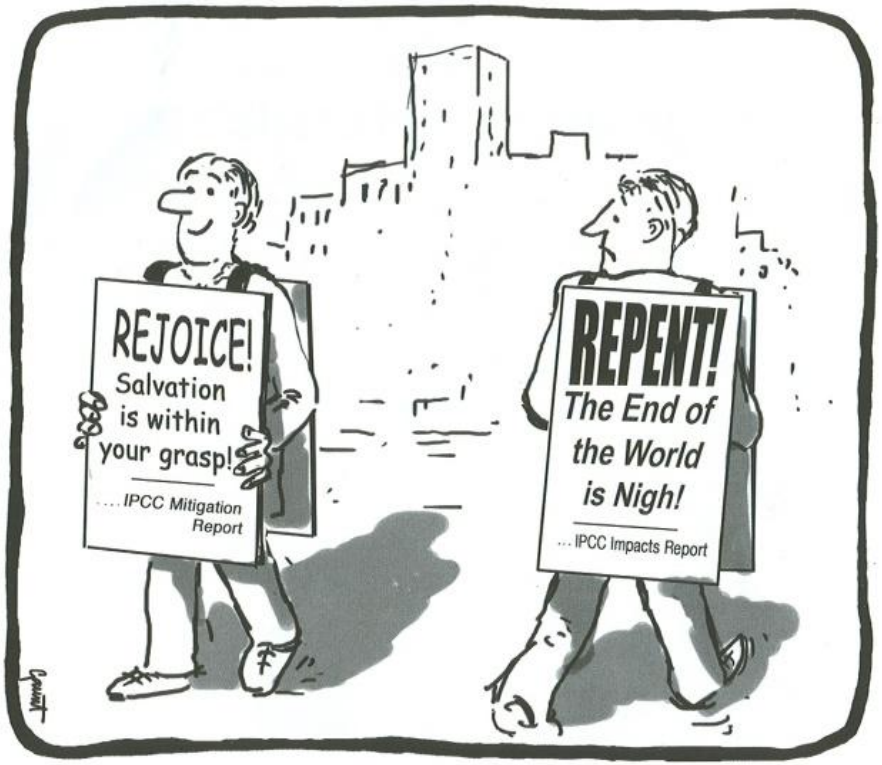
**Why has climate change become 'the mother of all issues'?**

**Why has climate change seemingly been such a difficult phenomenon to comprehend and tackle?**

***"I do not believe we will ever have a final agreement on climate change, certainly not in my lifetime… If we ever have a final, conclusive, all-answering agreement, then we will have solved this problem. I don't think that's on the cards."***

**Christiana Figueres, executive secretary of UN FCCC, 9 June 2010**

# The idea of framing

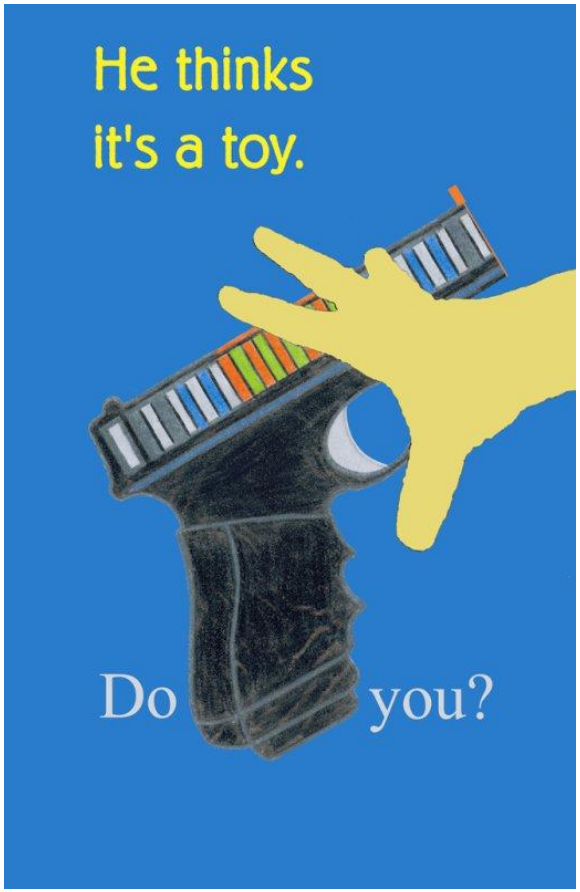



**Reporting messages from the IPCC 4th Assessment Report, Spring 2007**

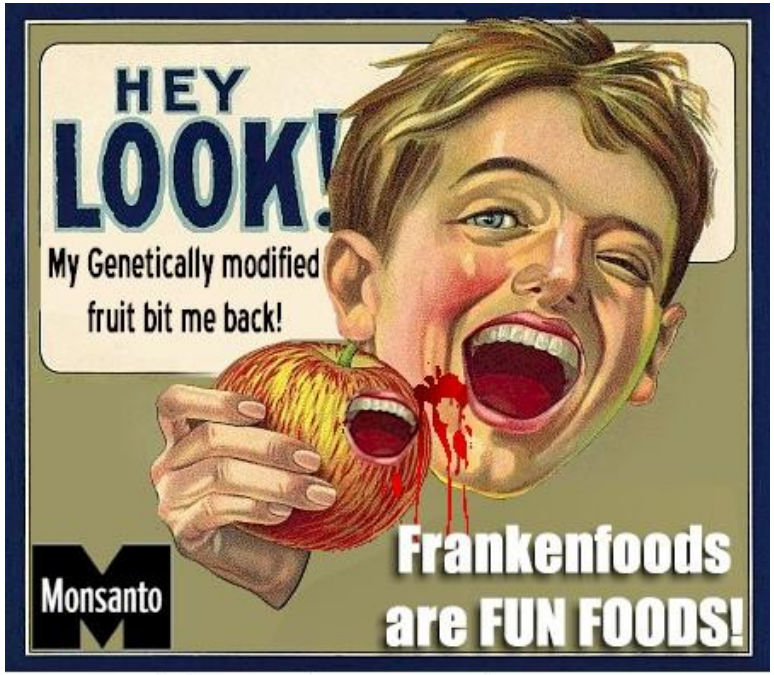
**Frames are deliberate ways of structuring complex issues which lend greater importance to certain considerations, responsibilities and solutions over others**

# Examples of framing

**‘Gun control’ or ‘gun safety’?**




**‘Frankenfood’ or ‘food biotechnology’**




oldamericancentury.org

# Framing climate change

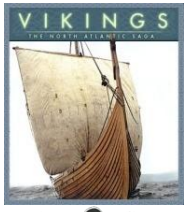
1 Climate change as ... market failure

2 Climate change as ... technological hazard

3 Climate change as ... global injustice

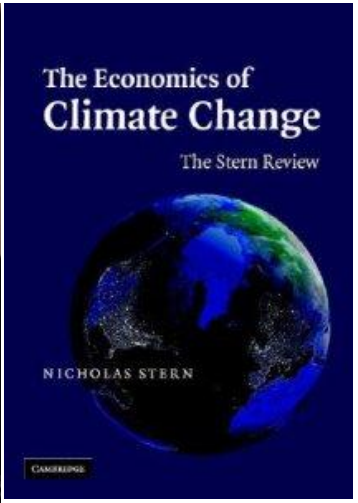
4 Climate change as ... overconsumption

5 Climate change as ... mostly natural




6 Climate change as ... planetary 'tipping point'

# 1 Climate change as ... market failure




*"Climate change is the greatest example of market failure we have ever seen"*

**Individuals, acting independently and rationally, will ultimately destroy a shared limited resource ... even when it is clear that it is not in anyone's long term interest for this to happen**

**Garret Hardin 1968**

# 1 Solution – price carbon

***"Climate change is a business opportunity. The carbon market is the key. A well functioning and robust market with a long-term price signal is essential to redirect investments towards a climate-friendly path."***

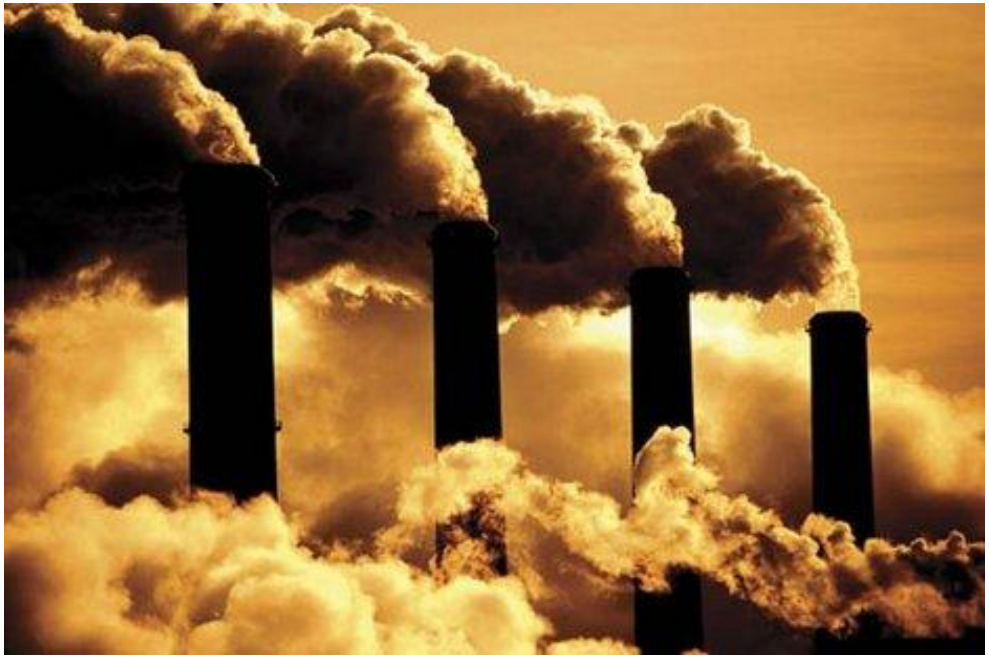
**Connie Hedegaard, September, 2009**

**European trading price fell from €30/tCO2 in July 2008 to c.€16 today**

**Waxman rkey 'Cap-a Trade' Bill**

# 2 Climate change as ... technological hazard

**Climate change is a 'manufactured risk', a risk created by a growing humanity and its inability to understand the consequences of new technologies**

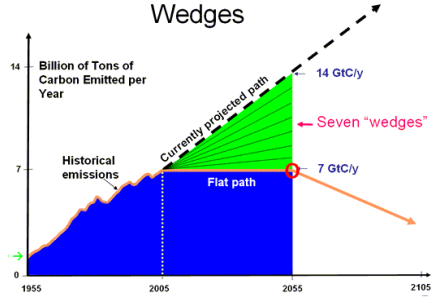


**cf. asbestos, nuclear waste, ozone depletion**

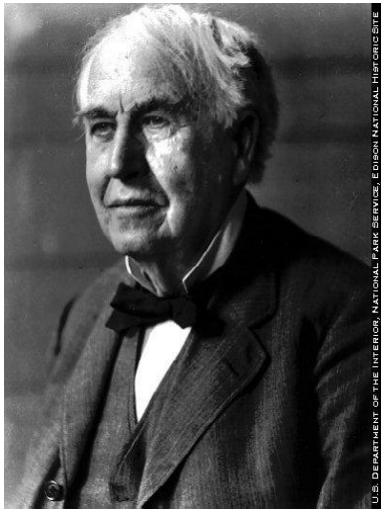
# 2 Solution – clean energy technology

*"Humanity can solve the carbon and climate problem in the first half of this century simply by scaling up already known technology"*

**Robert Socolow and Stephen Pacala, 2004**

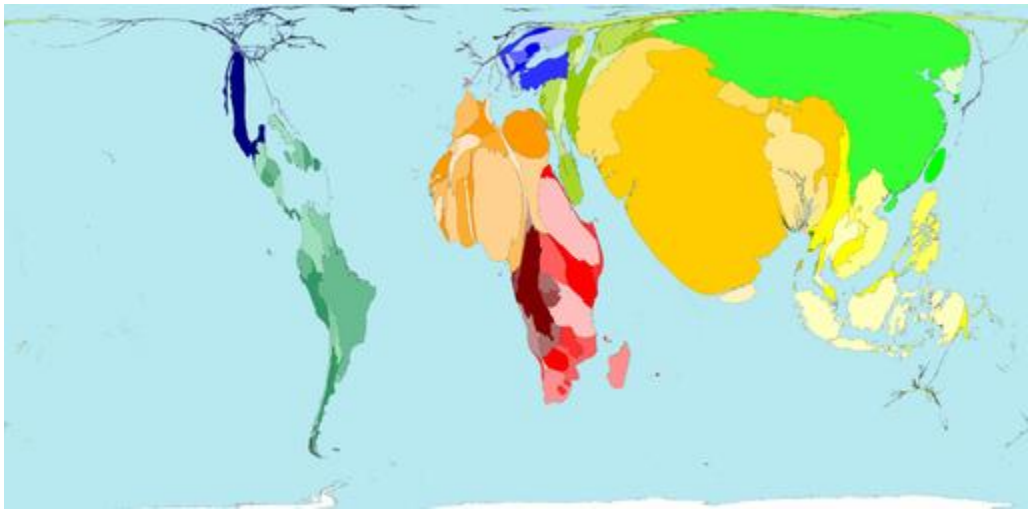



*"I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait until oil and coal run out before we tackle that."*

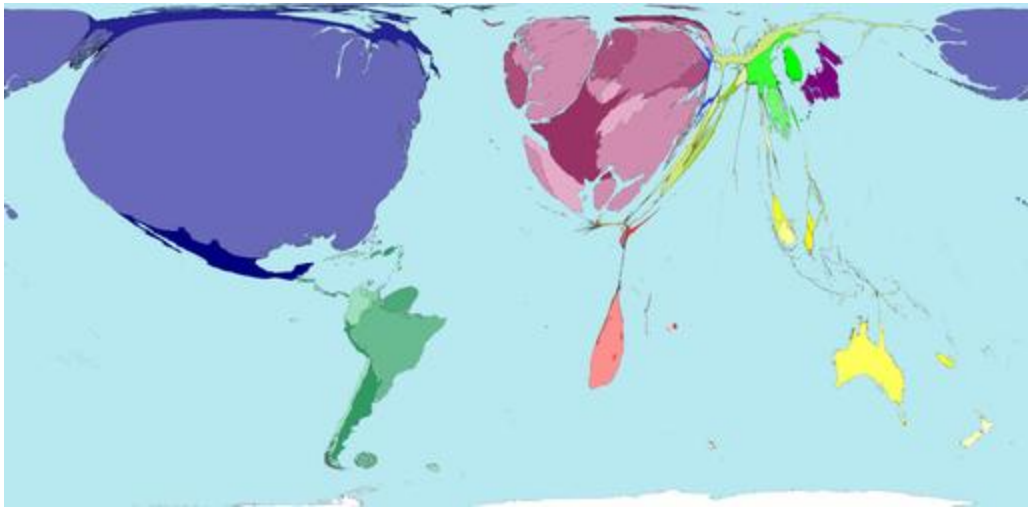



**Thomas Edison, 1931**

# 3 Climate change as ... global injustice

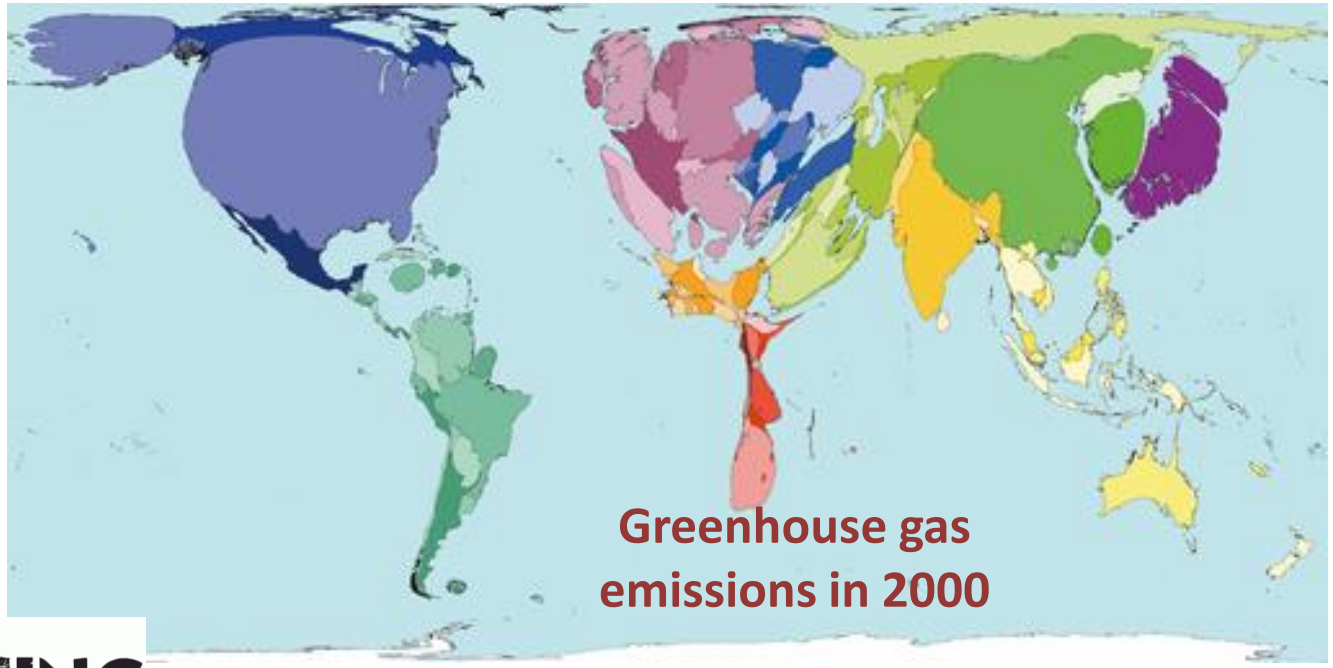


**Proportion of people living on less than $10/day**



**Proportion of people living on more than $200/day**

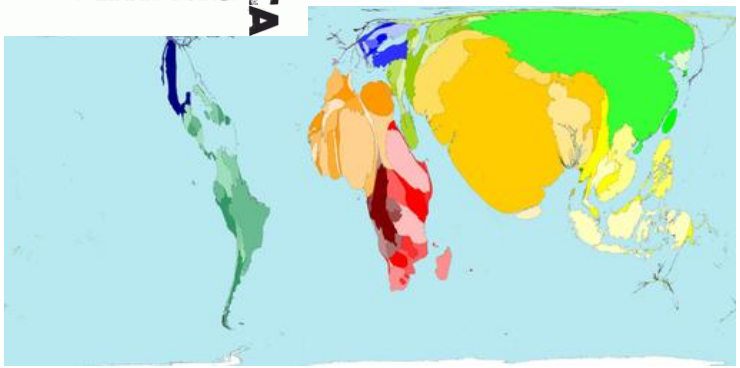
# 3 Climate change as ... global injustice

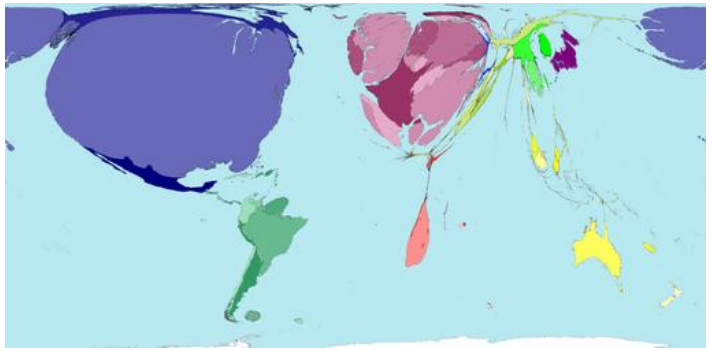


Greenhouse gas emissions in 2000

RISING TIDE NORTH AMERICA
CONFRONTING THE ROOT CAUSES OF CLIMATE CHANGE

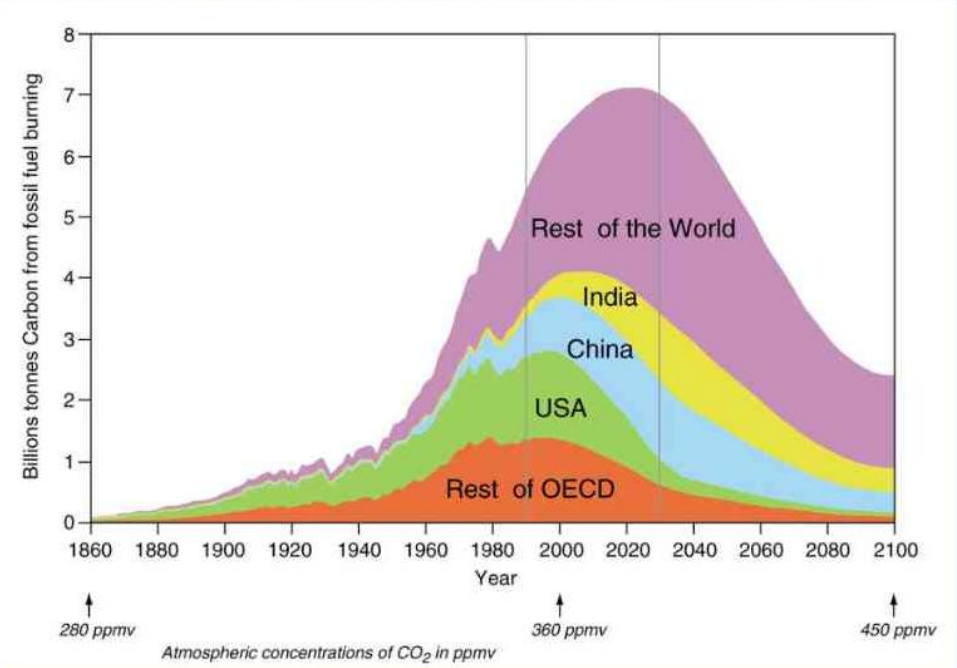
***"Climate change is a direct result of the economic domination of Northern interests and transnational corporations"***





# 3 Solution – contraction and convergence

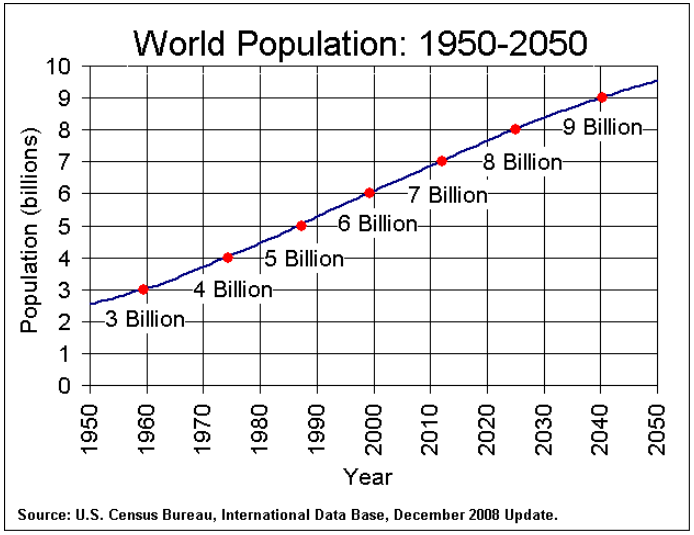
**First advocated in 1990 by Aubrey Meyer**



***"Long-term convergence of per capita emissions is ... the only equitable basis for a global compact on climate change"***

**Manmohan Singh, 30 June 2008**

# 4 Climate change as ... overconsumption

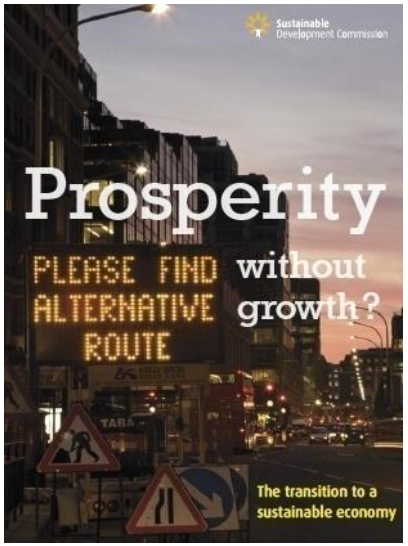



**I = P x A x T**

**All individuals should not be held equally morally culpable for their emissions - Anil Agarwal and Sunita Narain in their powerful 1991 pamphlet *Global Warming in an Unequal World***

# 4 Solution – prosperity without growth

***"The easy compatibility between economic growth and preventing climate change is an illusion"***




TRANSITION TOWN TOTNES

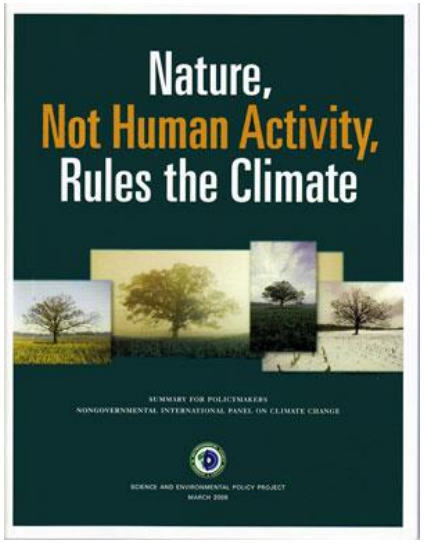
plane stupid

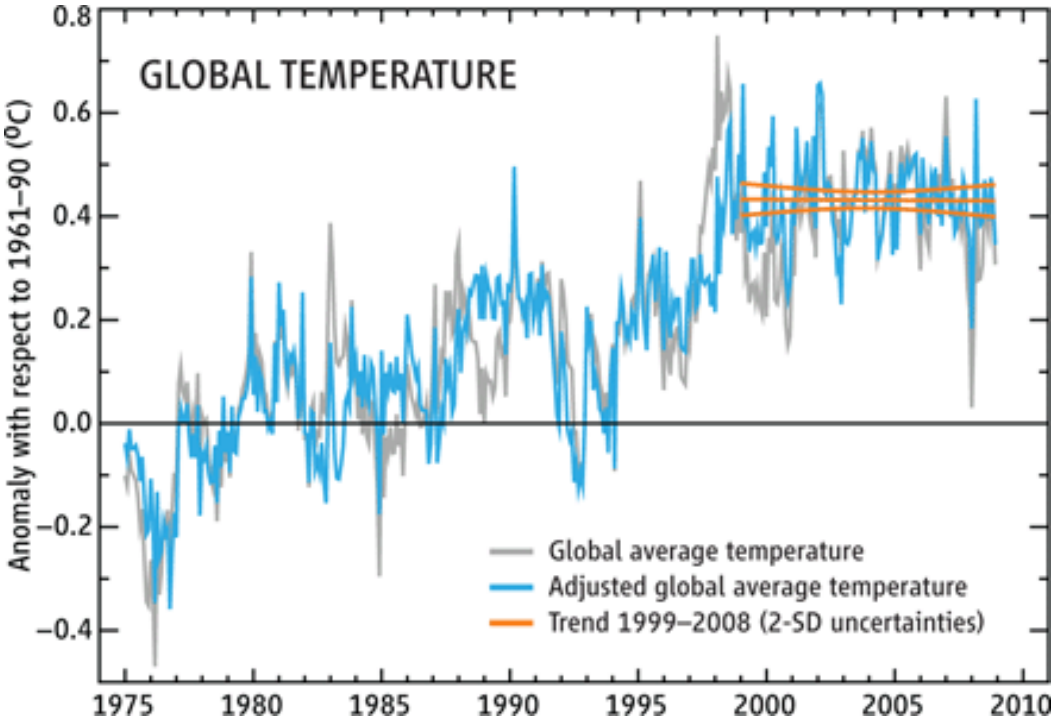
*bringing the aviation industry back down to earth!*

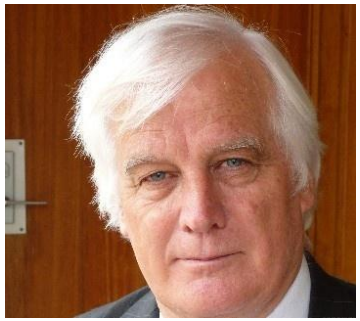
The Dark Mountain Project

OPTIMUM POPULATION TRUST OPT

# 5 Climate change as ... mostly natural



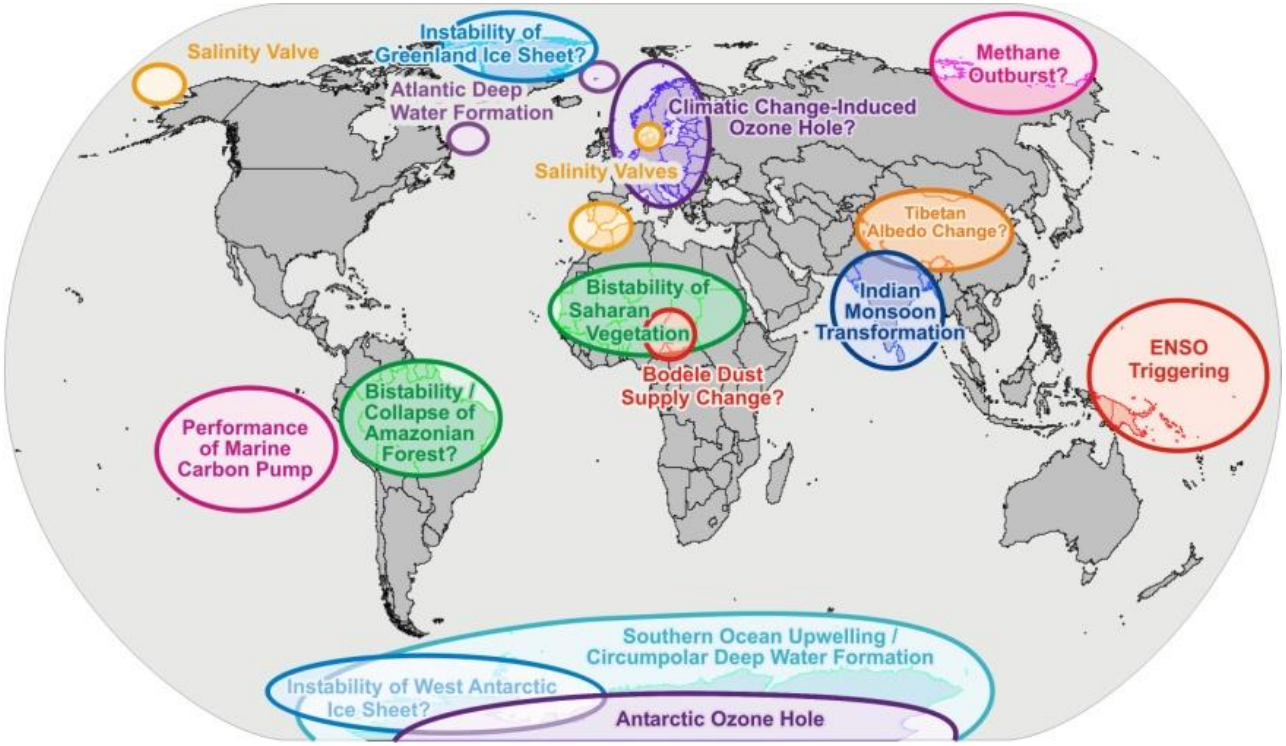
***"Our planet has been a warm wet greenhouse planet for 80% of the time - we've had huge climate changes in the past. To think that the "very slight" variations measured today are a result of human activity is wrong"***

**Ian Plimer, 'Heaven and Earth', 12 November 2009**

# 5 Solution – adapt better to climate risk

**Whether climate change is natural or not, all societies must seek to adapt to the risks and opportunities presented by climate**

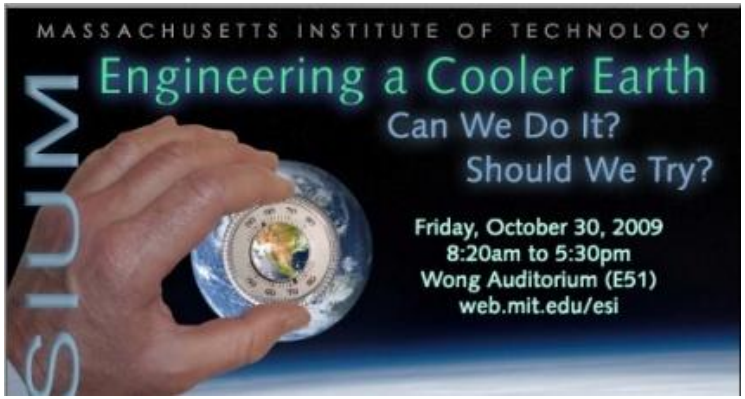
# 6 Climate change as ... planetary 'tipping point'

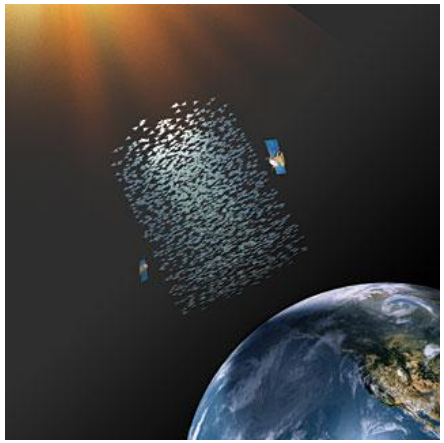


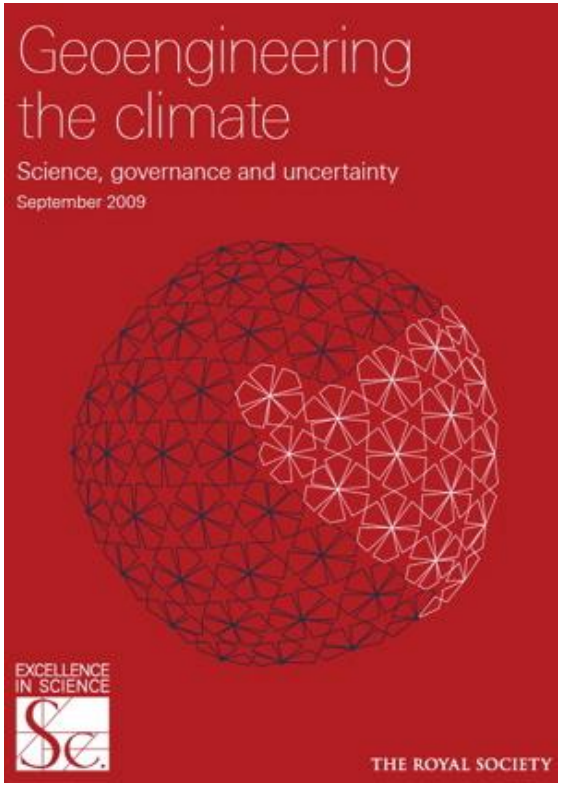
***"We have a window of only 10 to 15 years to avoid crossing catastrophic tipping points"***

**Tony Blair, October 2006**

# 6 Solution – climate engineering






theguardian **"Investment in geo-engineering needed immediately, says Royal Society"**

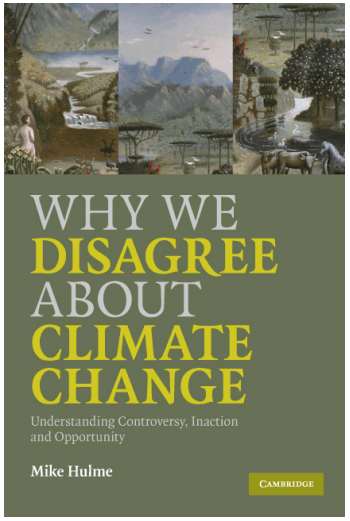
THE TIMES **"Royal Society warns climate engineering 'could cause disaster'"**

# Framing and ‘solving’ climate change

| | |
|---|---|
| 1 Market failure | ... price carbon and trade |
| 2 Technological hazard | ... clean energy technology |
| 3 Global injustice | ... contraction and convergence |
| 4 Overconsumption | ... prosperity without growth |
| 5 Natural | ... adapt, adapt, adapt |
| 6 ‘Tipping points’ | ... climate engineering |

# Why different framings?

**These different framings relate to our different worldviews ... our different beliefs, values and attitudes**



# Why we disagree about climate change

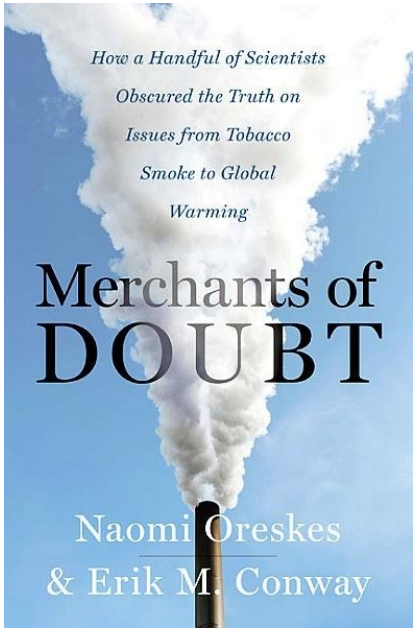
***"Those holding different value perspectives may see in the huge and diverse body of scientific information relevant to climate change, different facts, theories and hypothesis relevant to and consistent with their own normative frameworks"***

**Sarewitz (2004)**

***"Culture is prior to facts in the cognitive sense that what citizens believe about the empirical consequences of* [certain problems or] *policies derives from their cultural worldviews"***

**Kahan and Braman (2006)**

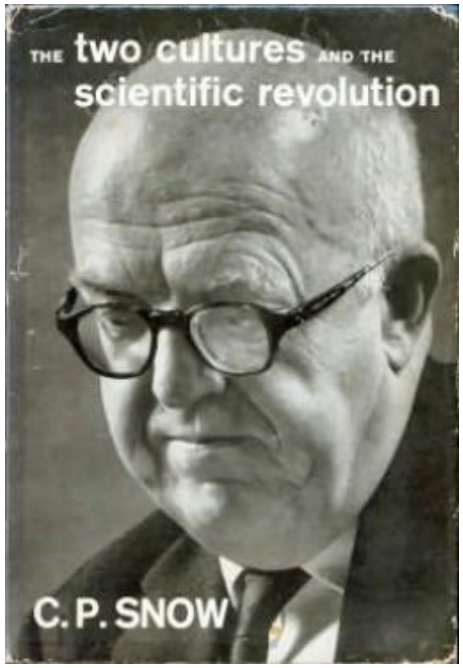
# The limits of science

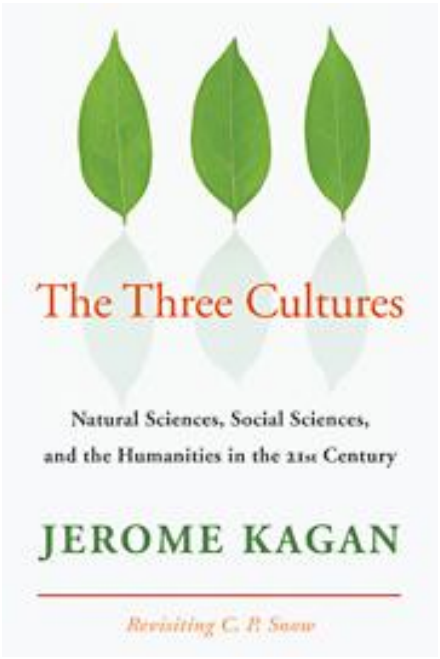


**"[Oreskes and Conway] *miss a crucial point: the ingrained assumption that scientific evidence is the only authority that can justify policy action – scientism – is what renders both policy and its supporting science vulnerable to the dogmatic amplification of doubt ...* [Oreskes and Conway] *could have gone further in asking how science can be led to overreach itself in arbitrating public facts, meanings and norms*"**

**Brian Wynne, *Nature*, 22 July 2010**

# Disciplines and inter-disciplinarity



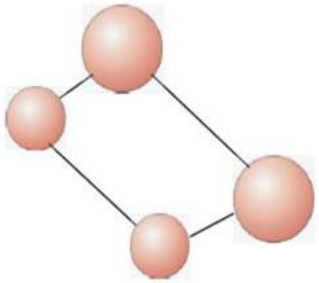




Snow 1959

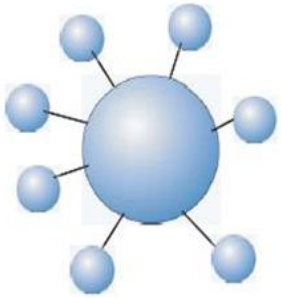
Kagan 2008

**Different ways of knowing the world and being in the world – a challenge for education**

# Pluralism and Polycentrism



**Polycentric architecture**

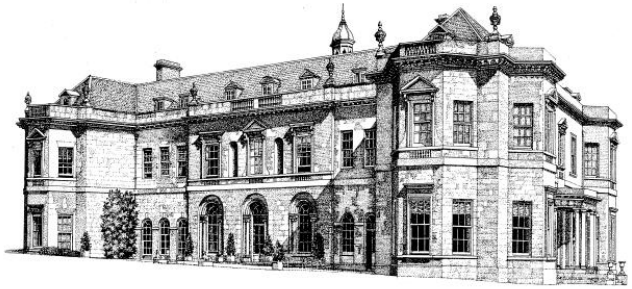


**Unicentric architecture**

The Hartwell Paper

A new direction for climate policy after the crash of 2009

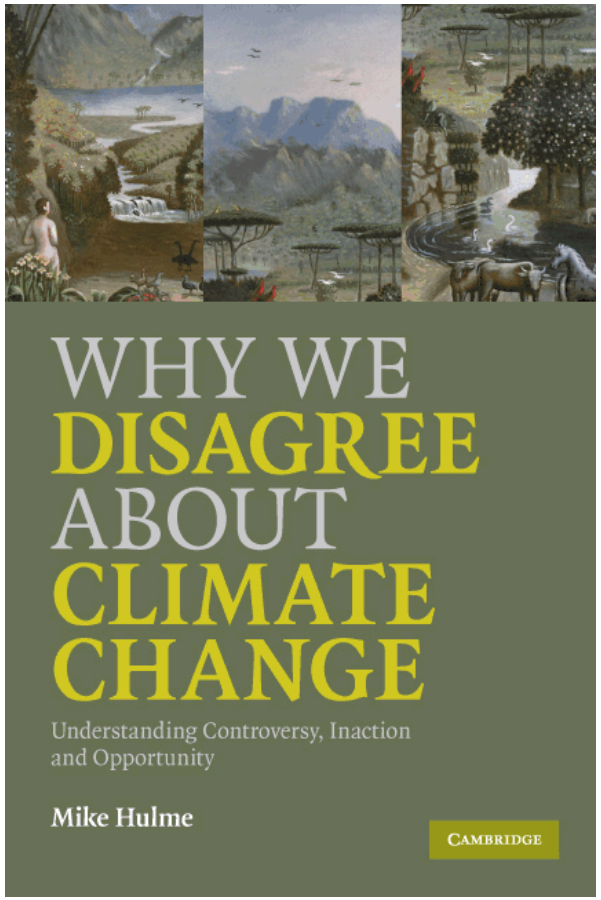
**Pluralism and polycentrism – a challenge for politics**



# ‘Using’ climate change, not ‘solving’ it

- Invigorate efforts to protect ourselves from the hazards of climate, whether these climate risks are natural or not
- Stimulate new investment in energy and transport technologies
- Refocus attention on the needs of the poorest of the poor, especially the Millennium Development Goals

- Galvanise new social movements to explore new ways of living in urban and rural settings
- Provoke new cultural, ethical and spiritual thinking about our relationship with the future

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