

# Why We Disagree About Climate Change

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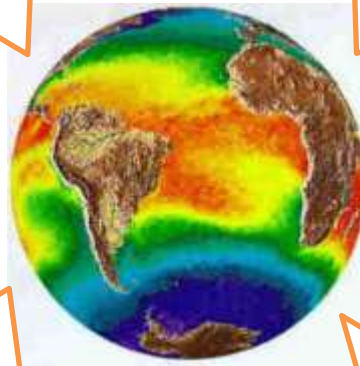


**Thursday 5 May 2011**

**Hot Science, Global Citizens Symposium, Sydney**

**Climate change is a pivotal issue for Australia ... [it] is real and it is caused to a significant extent by human activity**

**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**



**... hope that humanity might act to save itself from a climatic catastrophe seems to be draining away**

**On the balance of probabilities, the failure of our generation on climate change ... would lead to consequences that would haunt humanity until the end of time**

**These are not times for blame or accusation. There is a task ahead of all of us to address the climatic outcomes of our avarice and sloth**

# What scientists have concluded ...

1990 ... *'Global temperature has increased by between 0.3° and 0.6°C over the last hundred years ... **broadly consistent with** predictions of climate models, but ... also of the same magnitude as natural climate variability'*

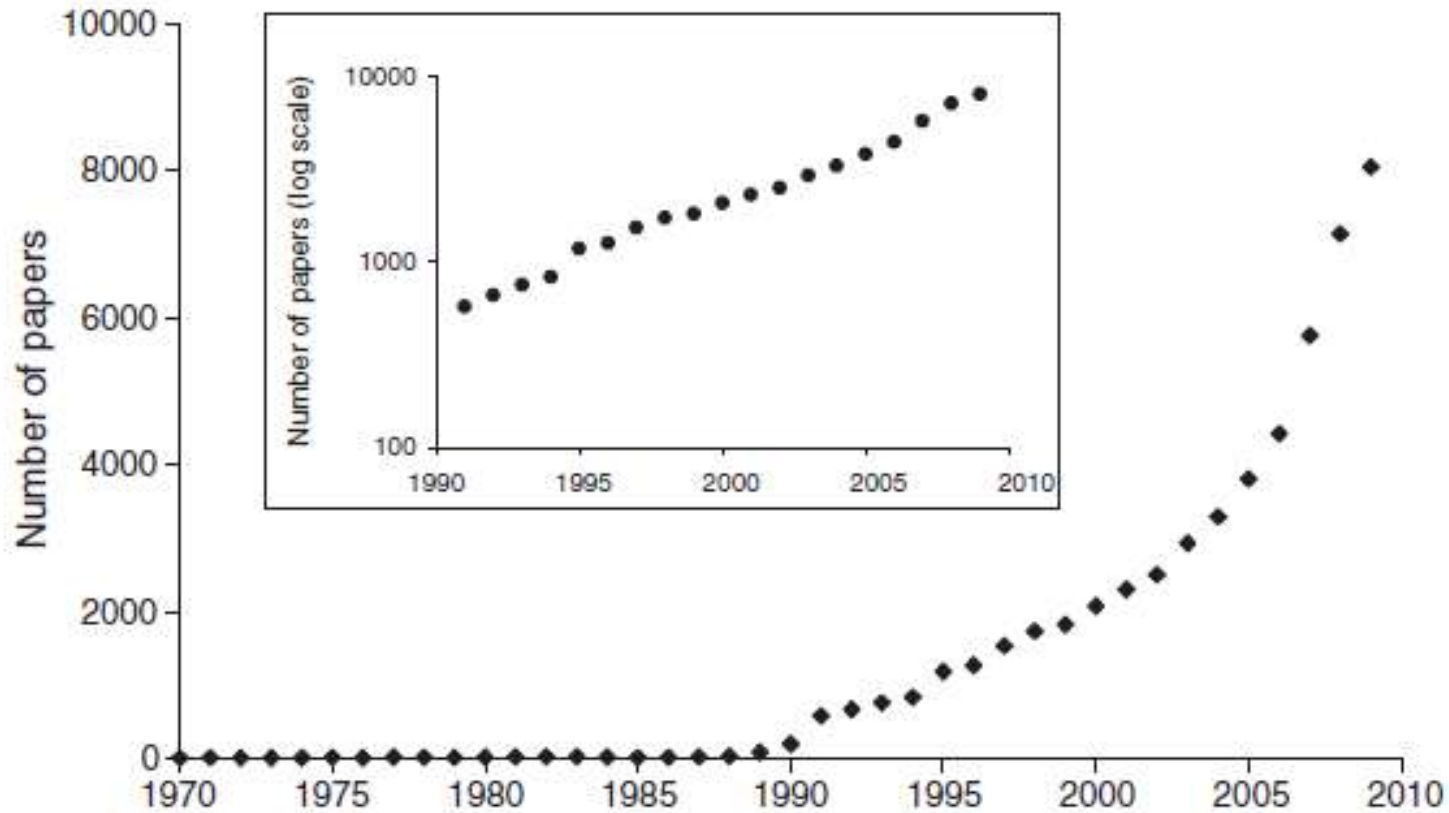
2007 ... *'Most of the observed increase in global average temperatures since the mid-twentieth century is **very likely due** to the observed increase in anthropogenic greenhouse gas concentrations'*



1990 ... Projections of global sea-level rise to 2100 in the **range 18 to 110 cm**

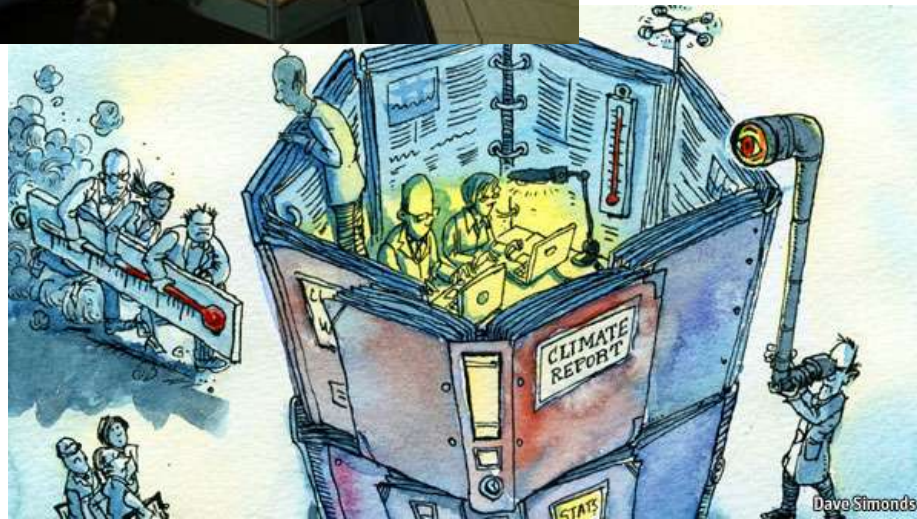
2007 ... Projections of global sea-level rise to 2100 in the **range 18 to 59 cm**, plus an unknown contribution from accelerated discharge from ice sheets

# How knowledge has grown ...



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

# And led to controversy ...



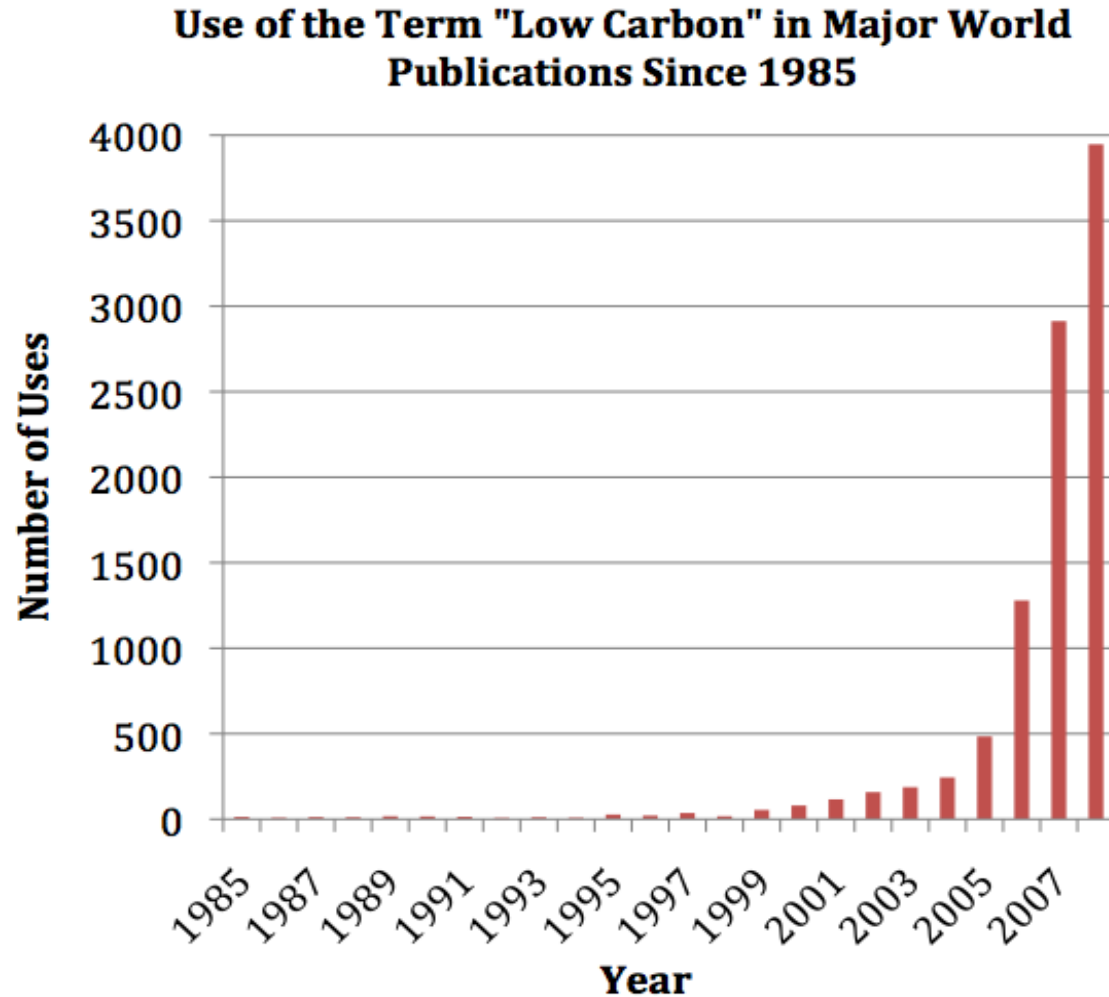
**ipcc**  
INTERGOVERNMENTAL PANEL ON  
climate change



# How the carbon markets have performed ...

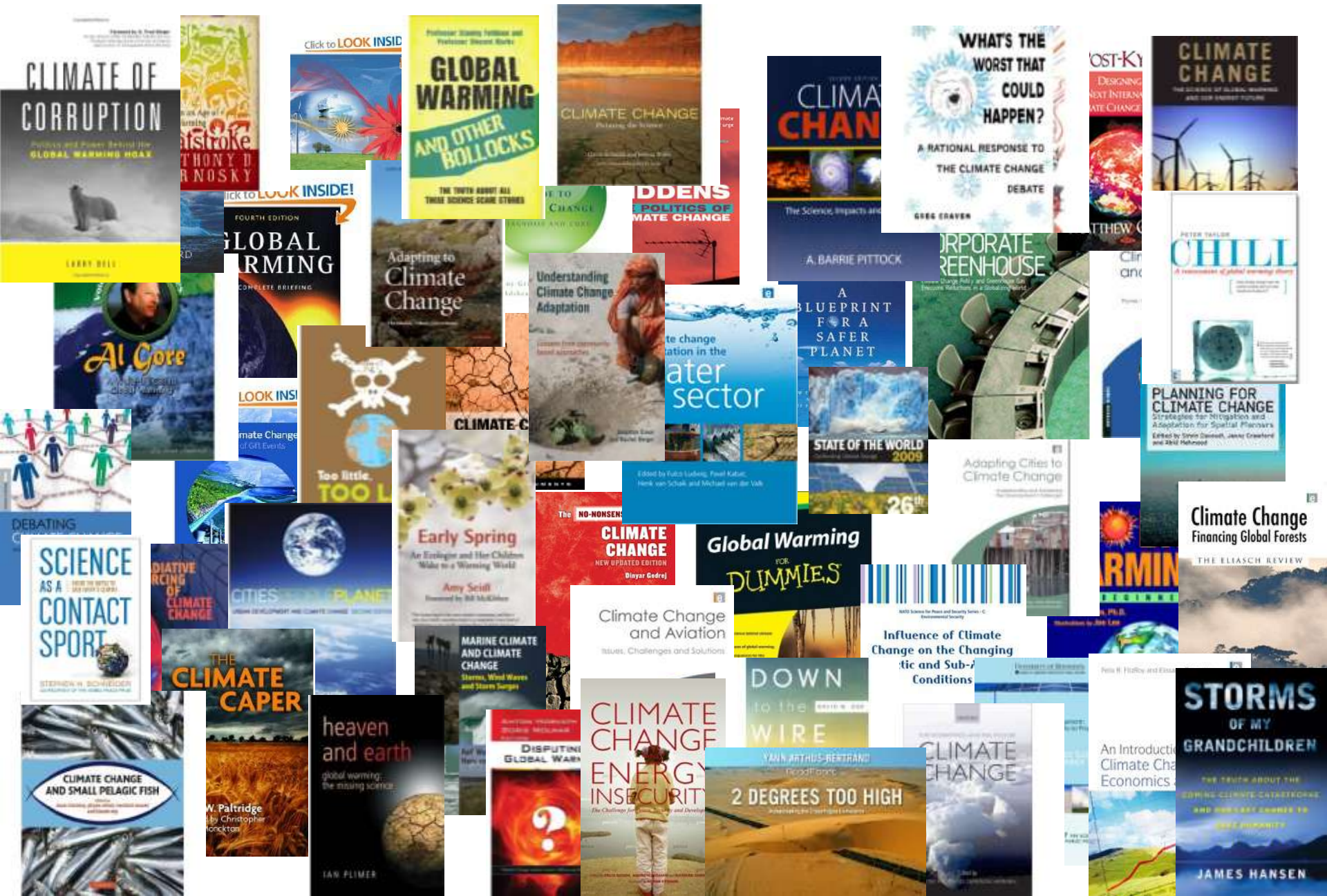


# How language has changed ...



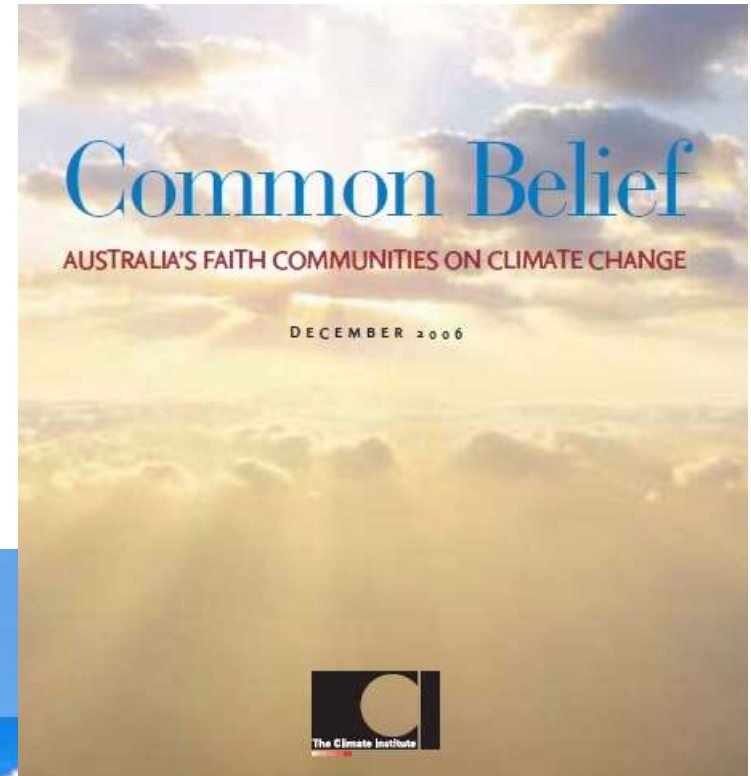
Source: Brigitte Nerlich, University of Nottingham

# How climate change has been written...





# How religions have responded ...



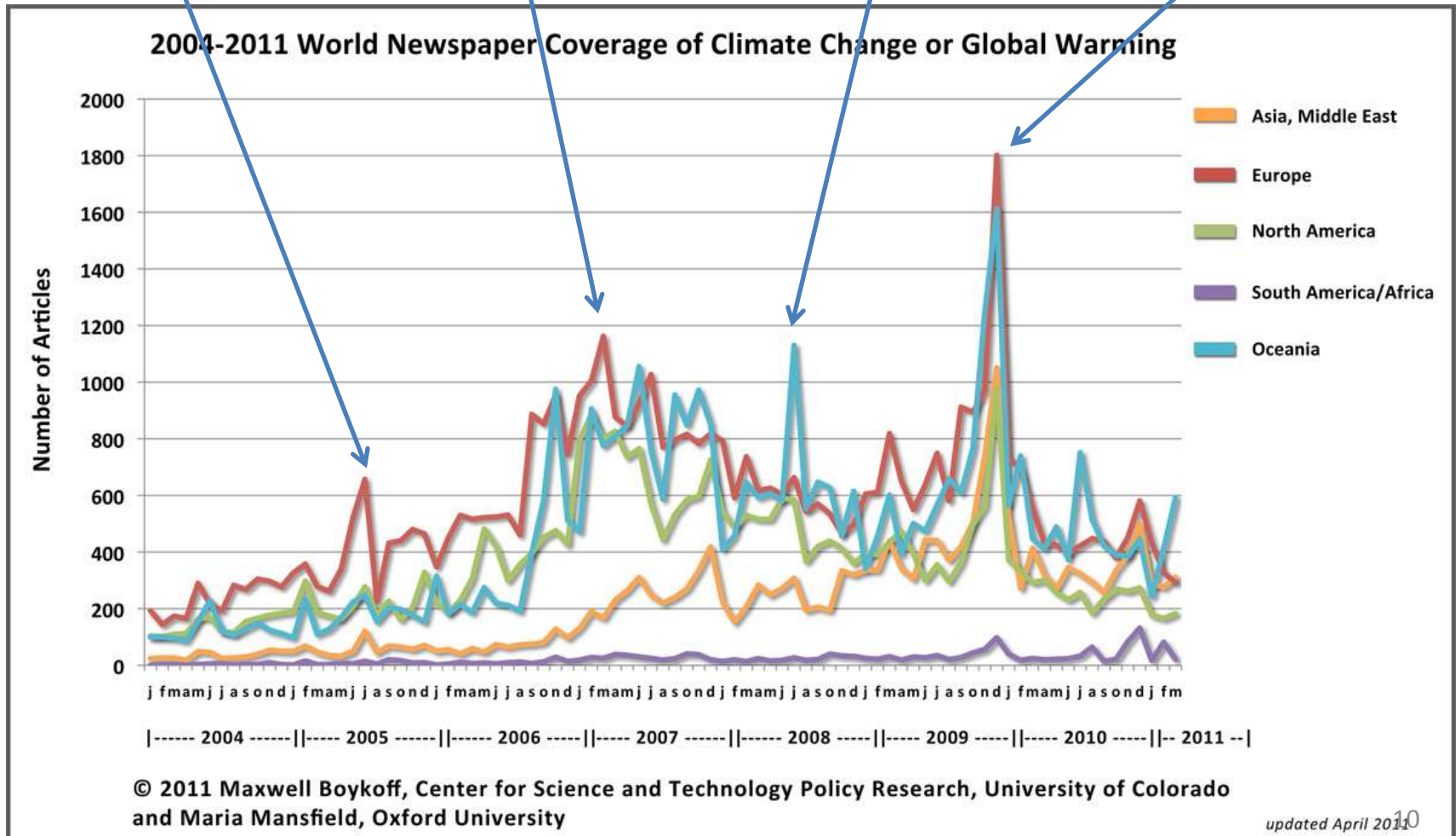
# How the media have reported ...

G8 Summit  
Gleneagles

IPCC 4<sup>th</sup>  
Assessment

Australian  
Garnaut report

Climategate  
& COP15

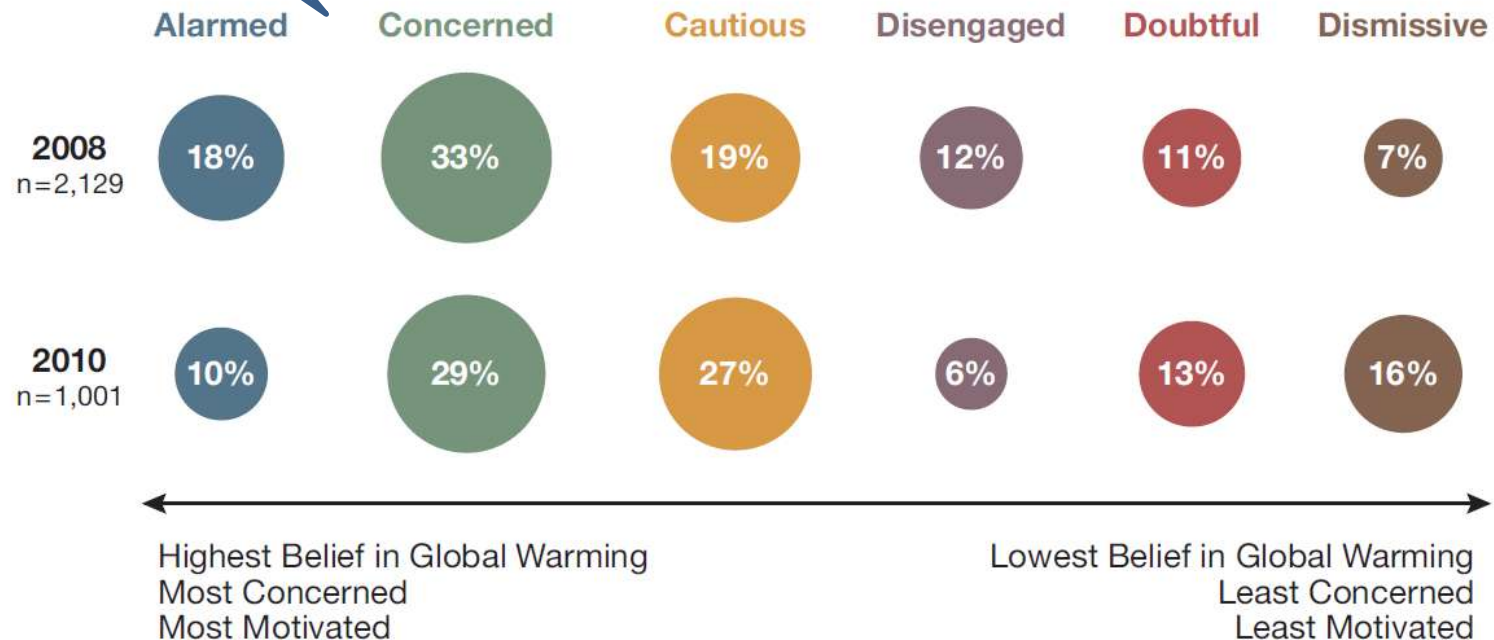


# How the public have thought ...

From  
51% to  
39%

Proportion of the US adult population  
in the "Six Americas": 2008 and 2010

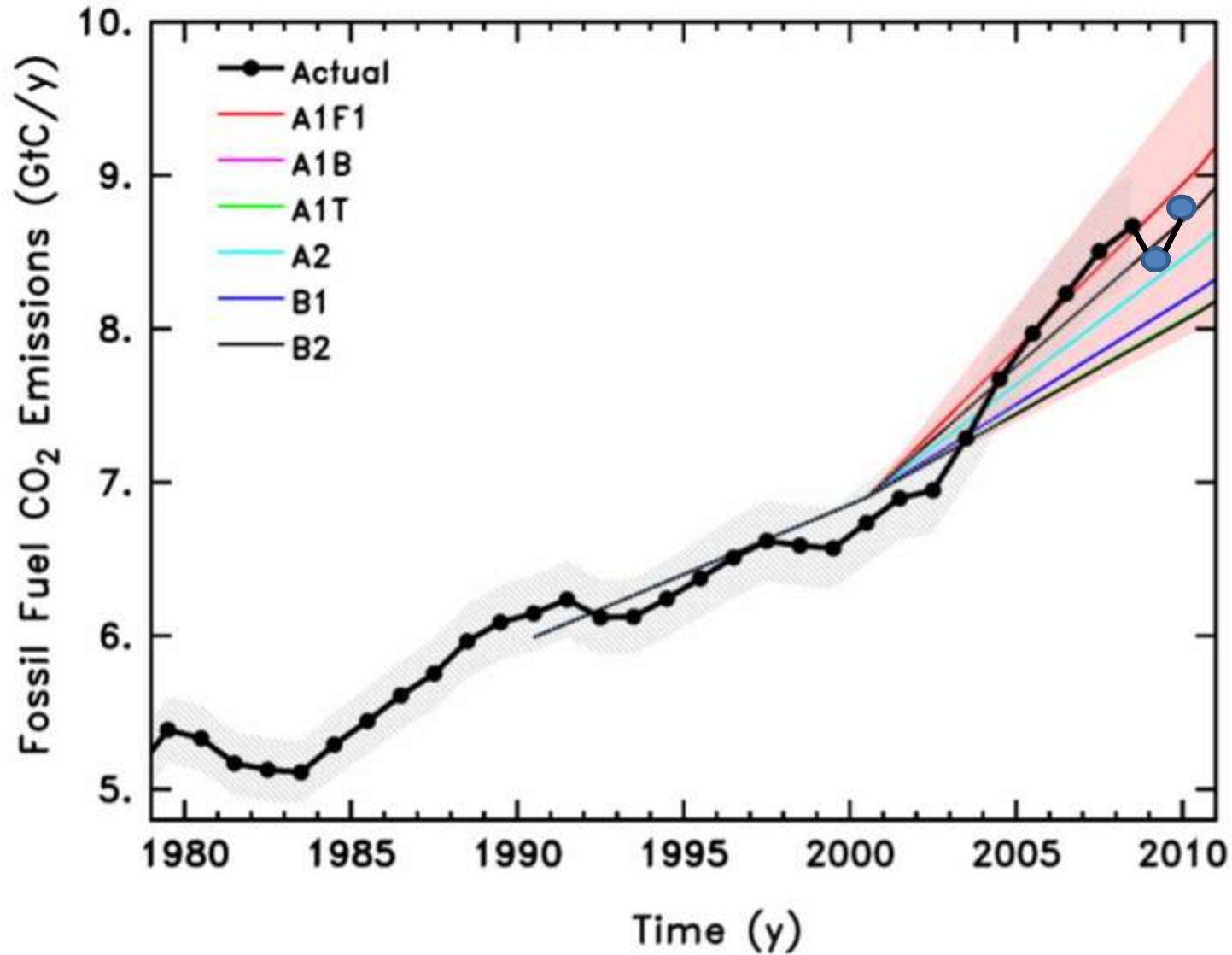
From  
18% to  
29%

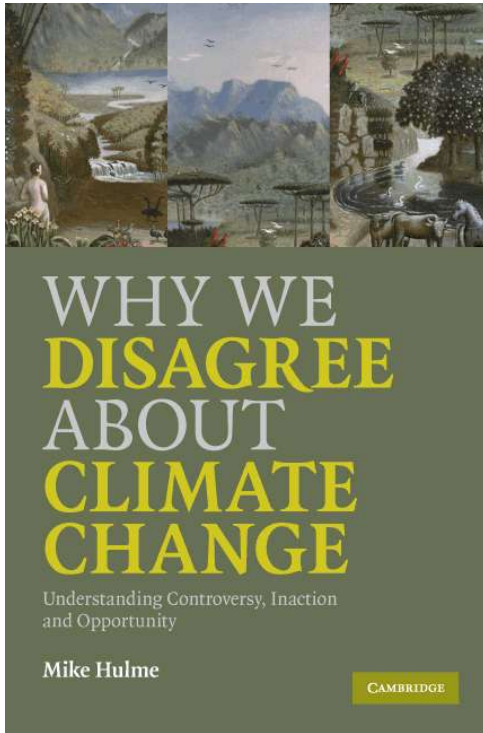


Source: Tony Leiserowitz, 2010, Yale University



# 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?**

# The idea of framing

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

**'Gun control' or  
'gun safety'?**



**'Frankenfood' or 'food  
biotechnology'?**



# Framing climate change

1 Climate change as ... market failure



2 Climate change as ... technological hazard



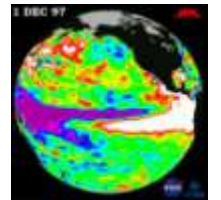
3 Climate change as ... global injustice



4 Climate change as ... overconsumption



5 Climate change as ... mostly natural

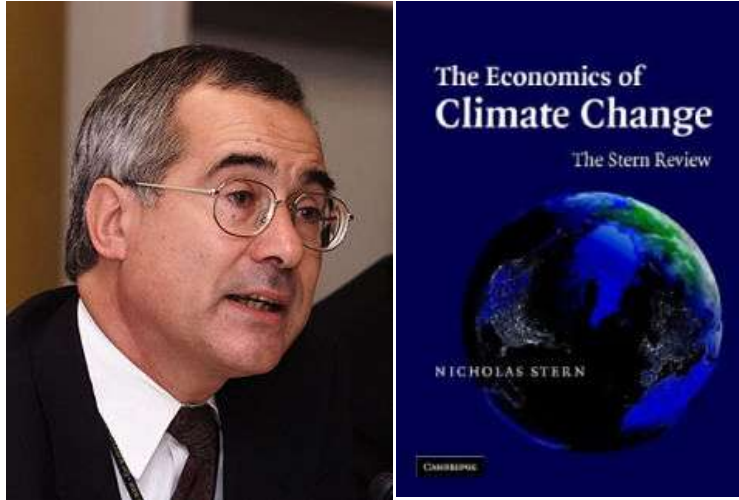


6 Climate change as ... planetary 'tipping point'

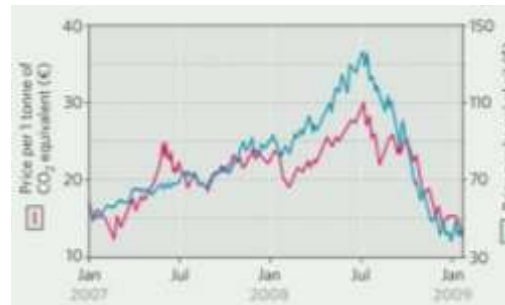




# 1 Climate change as ... market failure



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



***“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**



***“I'm determined to price carbon ... the time is right and the time is now”***

**Julia Gillard,  
February 2011**

## 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



*“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**



### 3 Climate change as ... global injustice



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



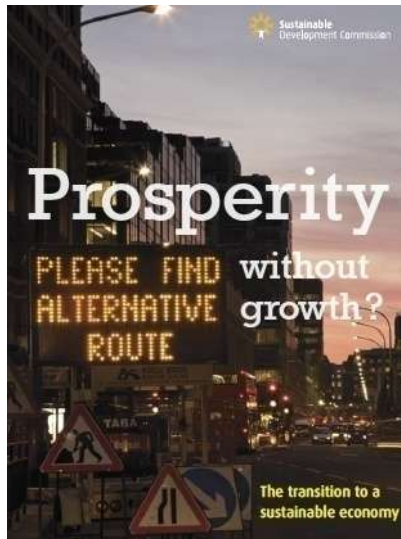
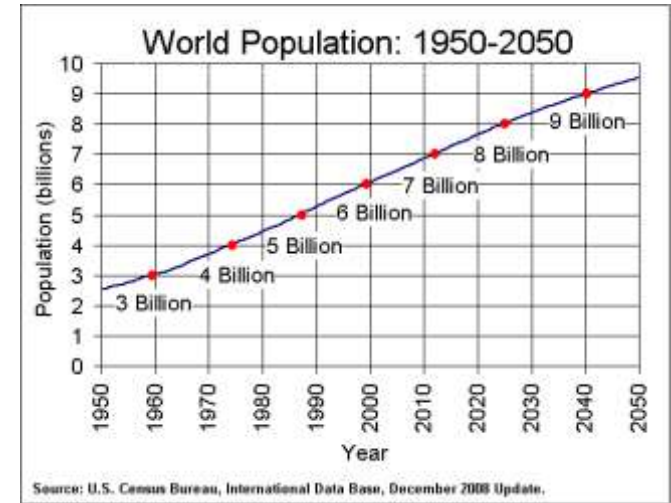
First advocated in 1990  
by Aubrey Meyer



# 4 Climate change as ... overconsumption



$$I = P \times A \times T$$

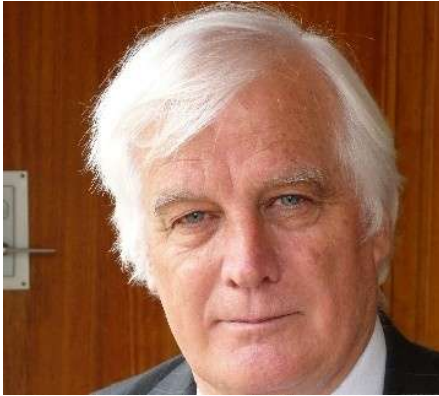


*"The easy compatibility between economic growth and preventing climate change is an illusion"*



*"Every £4 spent on family planning saves one tonne of CO2"*

## 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**



**WMO Global framework on climate services**

**Whether or not climate change is natural, 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

## Geoengineering the climate

Science, governance and uncertainty  
September 2009



THE ROYAL SOCIETY

## Climate scientists: it's time for 'Plan B'

Poll of international experts by The Independent reveals consensus that CO<sub>2</sub> cuts have failed - and their growing support for technological intervention



MASSACHUSETTS INSTITUTE OF TECHNOLOGY

## Engineering a Cooler Earth

Can We Do It?  
Should We Try?



Friday, October 30, 2009  
8:20am to 5:30pm  
Wong Auditorium (E51)  
web.mit.edu/esl

# 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

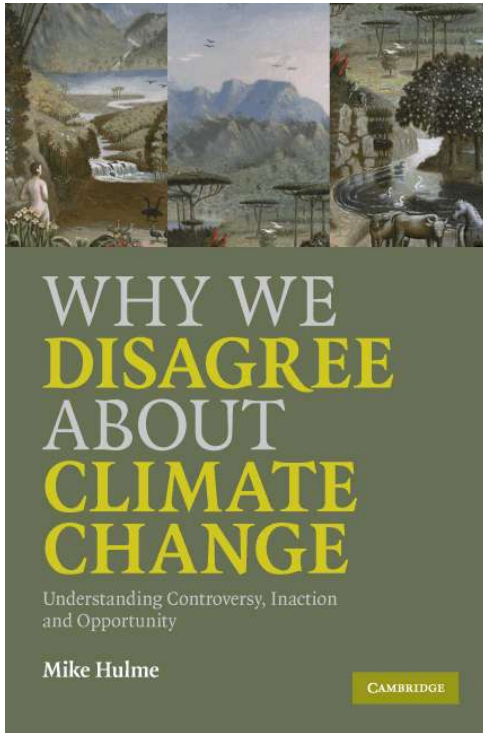
# Why different framings?



**These framings engage with different worldviews ... our different beliefs, values and attitudes**



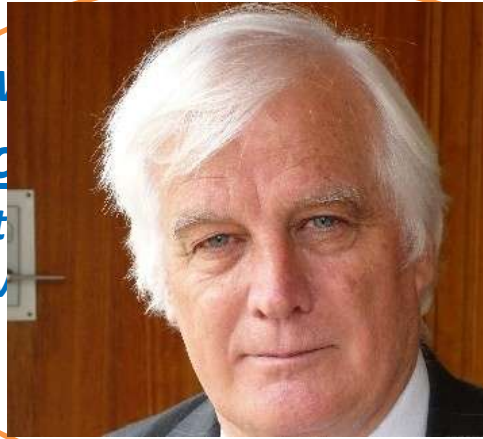




**So, back to my two questions ....**

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

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



# Whose voice?



# And so it matters who I am

- Saturated in English culture
- Trained as an academic geographer
- A critical realist in my epistemology
- A practising Christian
- A member of the British Labour Party



**What prior commitments – worldviews, stories, beliefs, values - do Julia Gillard, Ian Plimer, Tim Flannery, Ross Garnaut and Patrick Dodson bring to climate change?**



**And what prior commitments do YOU bring?**

# 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)**



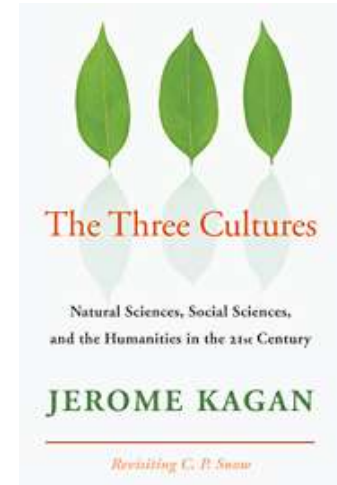
*“Culture is prior to facts in the cognitive sense that **what citizens believe about the empirical consequences of [certain problems or] policies derives from their cultural worldviews**”*

**Kahan and Braman (2006)**

# Cultures of knowing



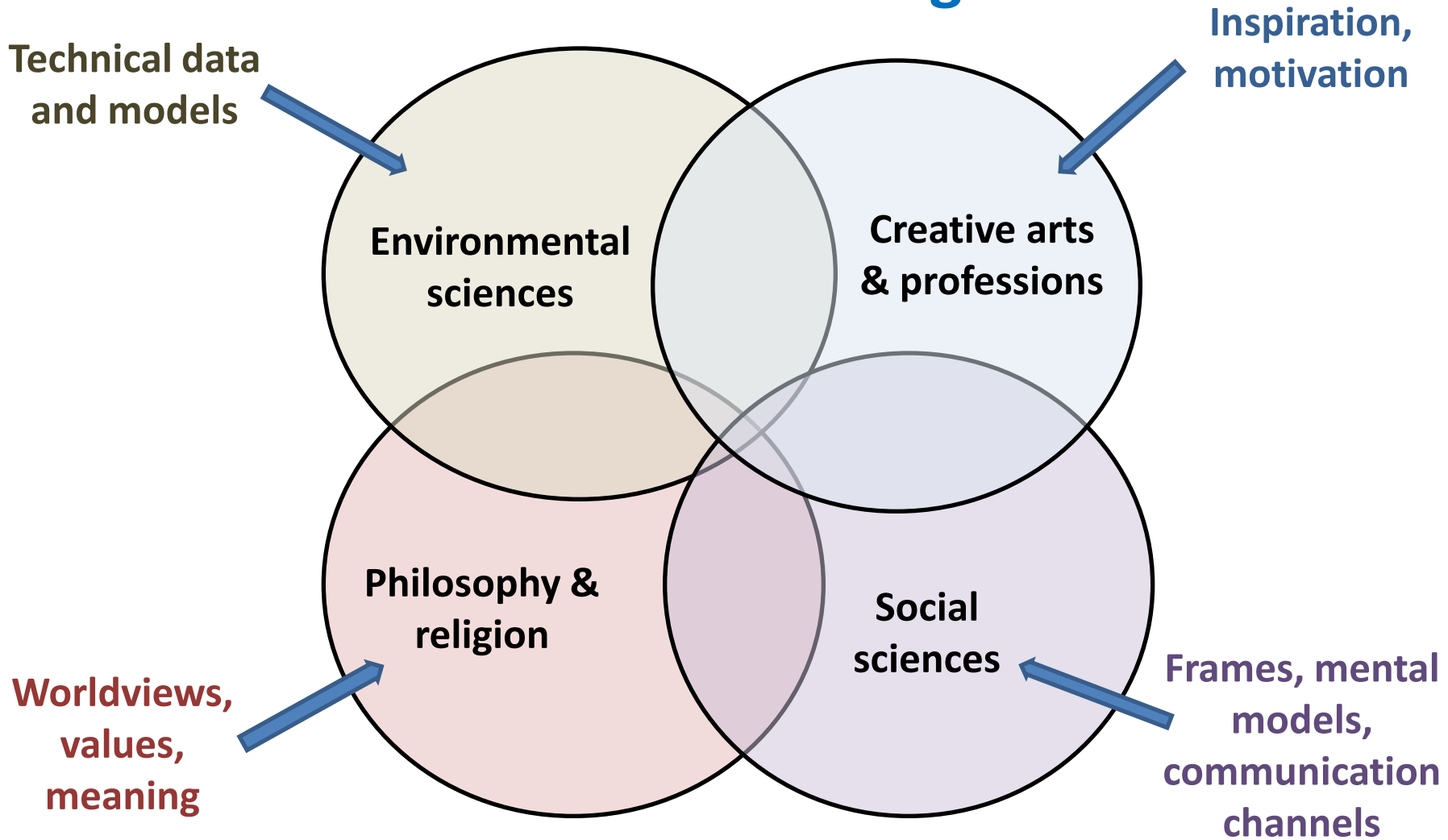
Scientific rationalism



***“Every society needs a cohort of intellectuals to check the dominance of a single perspective when its ideological hand becomes too heavy”***

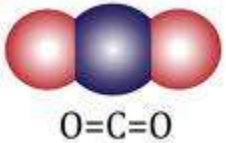


# Cultures of knowing



Nisbet, M.C. et al. (2010) Four cultures: new synergies for engaging society on climate change *Frontiers in Ecology and Environment* 8(6), 329-331

# What truths do the four cultures offer?



**Science:** e.g. radiative forcing of different gases



**Social science:** e.g. cultural filters of risk cognition

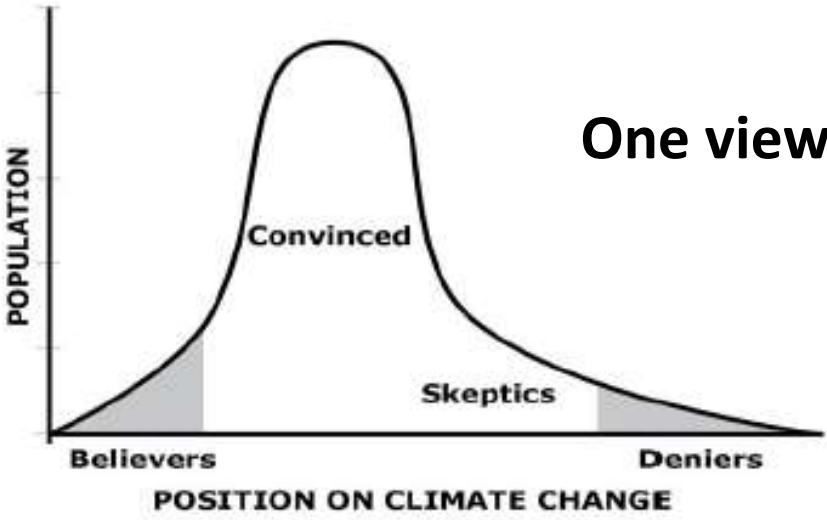


**Creative arts:** e.g. aesthetics and future imaginaries



**Philosophy & religion:** e.g. views of nature and humanity

# Pluralism



One view of pluralism

Another view of pluralism



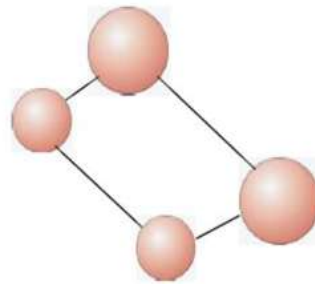


# Polycentrism

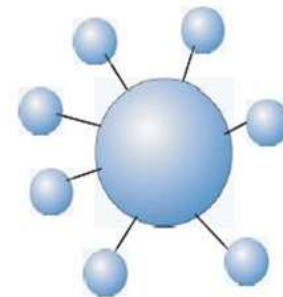


*“ ... many analysts have presumed that an enforceable global agreement is the only way to address the threat of climate change ... it would be better to self-consciously **adopt a polycentric approach** ... in order to ... to encourage experimentation and learning from diverse policies adopted at multiple scales”* **Elinor Ostrom, 2010**

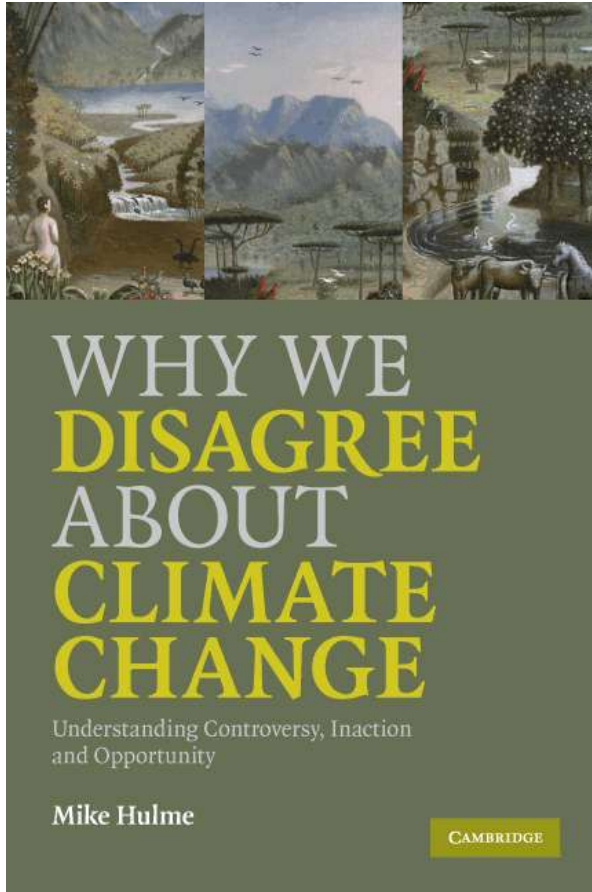
The Hartwell Paper  
A new direction for climate policy  
after the crash of 2009



**Polycentric  
architecture**



**Unicentric  
architecture**



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