Do you recognise these voices?

The threat from climate change is serious, it is urgent and it is growing ... we will be judged 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.

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.

Climate scientists have destroyed their own credibility by hyping global warming and cheating the scientific process.
What scientists have concluded ...

1990 ... ‘Global temperature has increased by between 0.3º and 0.6ºC 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
Number of papers with ‘climate change’ in article keywords or abstract in ISI Web of Science

Source: Aspinall, R. 2010
And led to controversy ...
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 ...

IPCC AR4

Climategate & COP15

Australian carbon tax

2004-2013 World Newspaper Coverage of Climate Change or Global Warming

© 2013 Boykoff, Maxwell T., and Nacu-Schmidt, Ami, Cooperative Institute for Research in Environmental Sciences (CIRES), Center for Science and Technology Policy Research (CSTPR), University of Colorado
How the public have thought ...

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

From 51% to 39%

From 18% to 29%

Source: Tony Leiserowitz, 2010, Yale University
From Berlin to Warsaw (via ...)
How carbon emissions have risen ...
My two questions from 2008 ....

Why has climate change become such a powerful and pervasive idea?

Yet why has climate change seemingly been such a difficult and divisive phenomenon to 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
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
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

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
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 emerge from our different worldviews ... our different beliefs, values and attitudes
Why we disagree about climate change

“There are those holding different value perspectives who 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)
Pluralism

‘plural, partial and provisional knowledge’ (V Brown, 2010) ...

‘plural and conditional advice’ (A Stirling, 2010) ...

‘plural climate ethics’ (M Kamminga, 2008)

‘pluralistic communication’ (D Kahan, 2010)

“If we want democratic policy-making to be backed by the best available science, we need a theory of risk communication that takes full account of the effects of cultural on our decisions”

So what?

• “Present information in a manner that affirms rather than threatens people’s values”

• “Make sure sound information is vouched by a diverse set of experts”
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
Climate pragmatism

- Attend to short-term climate forcers – e.g. black carbon
- Adaptation to climate risks – e.g. adaptation as public good
- Invest in energy technology innovation – human dignity
My two questions from 2008 ....

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