Ethnographic Exploration: The Human Faces of Climate Skepticism

Myanna Lahsen
Earth System Science Center,
Brazilian Institute for Space Research (INPE)
Brazil
myannal@gmail.com

CNRS, Paris, 6 March 2013
Workshop Question

• What and how do different theoretical approaches and methodologies contribute to understanding national climate debates, including the multiplicity of reasons why some challenge “the climate consensus”? 
Ethnography

• Reveals the **human faces** of climate skepticism;
• Reveals skepticism as an outcome of socio-cultural experiences & inter-relational dynamics
• Interviews and on-the-ground ethnographic methods **identify skepticism** where it otherwise may be overlooked – **nuances, differences**

• What implications and importance for the politics?
Premises & Argument

• (1) Status quo: stalemated polarization & policy gridlock
• This - & Climategate - beg reexamination of strategies
• (2) Polarization could perhaps be reduced by understanding of the human faces & nuances of positions: modify “boundary-work” (dominant framings - popular & academic)
• (3) alienation is driver of tensions among scientists, underpinning backlash engagements & modest skeptics
• (4) worth considering a cultural and dialogic approach, rather than the “boundary-work approach”
  – understanding & recognition of the heterogeneity (scepticism) within the scientific mainstream
  – openness - avoiding “old conversations” (discursive traps*)

The Argument, cont.

Contrarians (lost cause), mainstream “skeptics” are not;

When failing to show respect and tolerance for divergent views, environmentally concerned analysts fail to find common ground with informed, mainstream skeptics, thereby making unnecessary enemies and diminishing the size and strength of their coalition.

Understanding values & reasoning behind scepticism
- less vilification
- less polarization
- weaker anti-environmental movement;
  broader environmental agenda & coalition
- resilience through diversity; possible broadening science and policy agenda beyond a narrow climate focus
The Boundary Work Approach (BWA)

‘the climate question is settled and no longer contested among credible scientists’

- discredits all scepticism
- obscures any skepticism that exists within mainstream;
- self-servingly (politicized) narrow definition of expertise
- assumes “strong front strategy” is necessary for policy action
- idealizes and avoids critical analysis of mainstream scientists, including the IPCC
Tenets of BWA

• “scientists have understood that global warming was going to happen for a long time”;
• “scientists have been understanding the basic premises of the science” since the late 1970s and there has been “no question among climate scientists, oceanographers and atmospheric physicists that [anthropogenic?] global warming is in fact happening.”
• Scepticism is created by ‘a coordinated, lavishly funded campaign by a vested political and economic interests supported by a mere handful of contrarian scientists
• “denialists” and “denialism”
– Critics: politics, money, self-interest;
– Mainstream scientists: lofty pursuits, truth (are not "environmental community" or motivated by environmental (extra-scientific) values
– contrarians’ skeptical arguments are “not about science” but, rather, are “politics camouflaged as science”; they are guided by criteria that is “not purely scientific”
Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern

Bruno Latour

Wars. So many wars. Wars outside and wars inside. Cultural wars, science wars, and wars against terrorism. Wars against poverty and wars against the poor. Wars against ignorance and wars out of ignorance. My question is simple: Should we be at war, too, we, the scholars, the intellectuals? Is it really our duty to add fresh ruins to fields of ruins? Is it really the task of the humanities to add deconstruction to destruction? More iconoclasm to iconoclasm? What has become of the critical spirit? Has it run out of steam?

Quite simply, my worry is that it might not be aiming at the right target. To remain in the metaphorical atmosphere of the time, military experts constantly revise their strategic doctrines, their contingency plans, the size, direction, and technology of their projectiles, their smart bombs, their mis-
STS

- Tradition of vigilance against technocracy, but the bigger enemy is the backlash machinery

- Symmetry principle as biased balance
The Fieldwork
1994-2000 (and ongoing)

Discovering the human faces
& the socio-cultural dynamics of the mainstream
and their (interactions with) critics
Experiencing the Scientific Mainstream

• Understanding where some of the skeptics’ criticisms come from
• Hearing of modelers’ resistance to critical input from empiricists – psychological investment in models that causes ‘fortress mentality’

*Modeler F*: There will always be a tension there. Look at it this way: I spent ten years building a model and then somebody will come in and say ‘well, that’s wrong and that’s wrong and that’s wrong’. Well, fine! And then they say, ‘well, fix it!’ [And my response to them is:] ‘you fix it! [laughs] I mean, if I knew how to fix it, I would have done it right in the first place!!! [Laughs] And what is more, I don’t like you anymore – all you do is you come in and tell me what is wrong with my model! Go away!’ [laughter]. I mean, this is the field.
Modeler D: There are many ways to use models, and some of them I don’t approve of. [Pause] It is easy to get a bad name as a modeler, among both theoreticians and observational people, by running experiments and seeing something in the model and publishing the result. And pretending to believe what your model gives – or, even, really believing it! [small laugh] – is the first major mistake. If you don’t keep the attitude that it’s just a model, and that it’s not reality ... I mean, mostly people that are involved in this field really have that, they have the overtone that it is.
And perceiving the role of differences in interactional styles (subcultures)
A Combative Style

• “The desired presentation of self can be characterized as competitive, haughty, and superficially nonconformist [...] One group leader said that to convince others of the validity of one’s work one had to have great confidence and be very “aggressive”; he added that one needed a certain “son-of-a-bitchiness” (Traweek 1988:87-8).
Fieldnotes

• Nierenberg: did I ‘remembered enough of my math to know that the logarithm of an exponential is linear?’ “well, this is very simple mathematics.”

• Seitz: questioned me on my foreign language skills and was obviously surprised and pushed a bit off-balance when hearing that I am fluent in Danish and French besides English.
NIERENBERG: [some people] really tried to block the publication of [Wigley’s] paper.

LAHSEN: So how do you explain that?

NIERENBERG: I don’t know, you explain it! That is your job. I’m giving you the facts!

LAHSEN: all right, but I am just interested in...

NIERENBERG: No! You explain it. You explain it. And if you can’t, there is no point to the whole thing! I think it is quite obvious, but if you don’t think it is obvious, you can forget it!
Polarization as Reflection of U.S. Cultural Styles

• Found many more "believers" in the U.S. than in Denmark. Noted that Danish culture tends to instill a good amount of skepticism, the value of the golden middle ground. "The education Danes get is built on skepticism. If there is fanaticism in Denmark, it tends to remain among real missionaries."

• “I sometimes admire the kind of fervor I finds in people in the U.S. but I cannot bring myself to act that way myself – and I really don't find it very helpful most of the time to do as they do over here, where one person might get up to the podium to tear down someone else, who then gets up after him and in turn tears the first guy up.”

• Source: Older generation Danish physicist
Experiences of the Climate Paradigm; Centrality & Meanings of the GCMs
• Oreskes & Conway:

• “Nierenberg, despite his intellect, really didn’t seem to understand that by participating in this set of attacks on Ben Santer, he was attacking the entire active community of climate modelers.”
Frederick Seitz

• Schneider as a “computer operator”
• "ingenious experiments with computers” “not tied necessarily to observations out there, in the real world.” versus
• "traditional attitude towards science [according to which] ultimately you have to use observations as your base, then combine it with speculation and theory” before drawing any conclusions.

  – LAHSEN: Okay so again, the science that is being done right now, you say that it is not good science because it is not based enough on observations, right?

  – SEITZ: That’s right

  – LAHSEN: So, inherently about models, you would say that it is not a very scientific method?

  – SEITZ: Yes.
“Being old-fashioned, I find computational approaches less elegant”
S. Fred Singer, “My Adventures in the Magnetosphere”

Reductionism;
Generalists
(“an incomparable group of scientific leaders, the generalists …”)

“Now a whole new generation has taken over the operation [of science], and many of them are not of the quality…; they are not as wetted to the scientific traditions in the sense that the older generations were. […] And I would guess that that is where our trouble is”
The Marshall Institute Physicists: An alienated, demoted old scientific elite

- Relative social demotion (and retirement) of the “self-perpetuating clique” of nuclear scientists who “dominated the science-government interface in the US for most of the 20th century”

  Charles Schwartz “Political structuring of the institutions of science” In *Naked Science*, ed L. Nader

- Nierenberg: “You can take [Frederick Seitz, an] extraordinarily distinguished, almost—maybe the most distinguished living scientist we have. You see the names they call him because of his position. Absolutely extraordinary man!”
Atmospheric models and “nuclear winter” – conditioning of attitudes & role of timing

- Computer simulation of the effects of nuclear war

- 1983 TTAPS model’s conclusion: --> ~35º C. temperature drop
  - Carl Sagan: “I do not think that our results are dependent on some quirk internal to the computer program” *(The Cold and the Dark, p.36)*
  - Paul Ehrlich: “I have a great deal of confidence in these results... If they change significantly – which seems extremely unlikely – then that is the way science goes.” *(p.70)*

- **Modification of projections:**
  3rd generation dynamic model -> “nuclear fall” *(1986-88)*

- 1988: Hansen’s testimony about global warming
• The extreme U.S. contrarians Seitz et al. articulate(d) most strongly a critique the elements of which are also found within the scientific mainstream (the differential: their conservatism)

• Discursive resonance especially with members of an older generation climatologists, who have subcultural overlap with weather forecasters
<table>
<thead>
<tr>
<th></th>
<th>Mainstream scientists</th>
<th>Mainstream skeptics</th>
<th>Contrarians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question evidence of anthropogenic climate change</td>
<td>Only parts, at the most, not the theory as a whole</td>
<td>Moderately so, yes, including the theory as a whole</td>
<td>Strongly, categorically</td>
</tr>
<tr>
<td>Skeptical of many other issues of environmental concern (planetary limits, pollution, etc.)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Work in official scientific institutions (accredited universities/federal research laboratories)</td>
<td>Yes</td>
<td>Yes</td>
<td>In some cases/partly</td>
</tr>
<tr>
<td>Primary venue for writings/publications</td>
<td>Peer-reviewed scientific journals</td>
<td>Peer-reviewed scientific journals</td>
<td>Non-peer-reviewed outlets (newspapers, reports, blogs, etc.)</td>
</tr>
<tr>
<td>Material and discursive ties to conservative factions</td>
<td>No</td>
<td>No/rarely</td>
<td>Yes, always</td>
</tr>
<tr>
<td>Political values</td>
<td>Liberal</td>
<td>Liberal</td>
<td>Conservative</td>
</tr>
</tbody>
</table>

• 3 broad groups of skeptically inclined scientists:
  
  • Dynamicists, physicists (theoreticians)
  • Climatologists, experimentalists (observationalists)
  • Weather forecasters
Weather forecasters

• Findings from 2010 survey of nearly 600 broadcast meteorologists:
  – only about 50% of them believe that global warming is happening.
  – Only smaller subset yet believes it is anthropogenic.
  – High public opinion impact

Sources: Homans, 2010; National Public Radio, 2010; Wilson, 2009
• William Gray, research meteorologist

*The Coloradoan*, Dec. 2010 (circulated on EANTH-list+):

– ’global circulation models’ representation of hydrolic dynamics is **greatly flawed** and causes them to simulate grossly **unrealistic high warming numbers**’

– “**Thousands** of our country’s **older** and more experienced meteorologists have **similar opinions** as mine ...knowledgeable specialists whose opinions **have yet to be included in ”broad, open and honest scientific debate”**
• Reginald Newell, MIT, empirical meteorologist:
  – “I don’t know why they take models seriously.”
Climatologists (synopticians)

• Not politically and culturally conservative;
• Environmentally concerned (less climate concerned)
• Aesthetics and ethics of Mode 1
• Alienation & consternation

• We have been working 40 years in the field. [We] really know the atmosphere ... We have looked at weather maps, we have been forecasters, we have done research with observations, we have thought a lot about this. Many of these global modelers ... are so involved with running their models that they haven't put the time in thinking how the atmosphere works.

• “What I resent most is that they say there is a consensus of scientists. There is not. Not at all”

• “Nobody loves me anymore and nobody knows the real atmosphere”
Quiet Discomfort with IPCC as involving a new mode of operation

• “There’s a blurring between [how the IPCC operates] and the traditional role of science; in science you have to make a hypothesis, then everyone tries to seek out its soft points. Yet with the IPCC, it doesn’t go like that. [I asked whether he meant that the IPCC doesn’t aggressively seek to disprove its own hypothesis, and he said “exactly.”] The thrust of the IPCC is to look for the social and political consensus. I find that really troubling. It’s really different…”

• “Particularly troubling is that the consensus/IPCC serves to mute the scientific debate. Those who are skeptical are reluctant to express that because they don’t want to go against the IPCC, against the consensus, and are concerned that they will be accused of being “in the pocket in the coal industry. The result is that a large segment within the scientific community feels differently from what is expressed by the IPCC yet don’t speak out. They are afraid of getting tainted [CLEAN] and so don’t engage in debate about the issue.”
Reactions to BWA
William Anderegg’s “black list”

――“the relative climate expertise and scientific prominence of the researchers unconvinced of ACC are substantially below that of the convinced researchers.”

Skeptical Authors on Climate Science

This table lists all the names I've found who have signed any of the open letters or declarations expressing skepticism of the IPCC's findings, of climate science generally, or of the 'consensus' on human-induced warming, and/or arguing against any need for cuts to greenhouse gas emissions.

Next to each person's name is their standing in the overall list of climate authors, in the same sort order as this table.

The article Expert Credibility in Climate Change in PNAS (Anderegg, Paul, Harold & Schneider, DOI 10.1073/pnas.1003187107) used data gathered in the course of building this database.
“This paper is yet another example of the attempt to marginalize and ‘bin’ scientists who differ from the IPCC perspective...”

Scientist on the list - Roger Pielke Sr. - on blog
• Geographer, prof. UCLA:
  – “the most despicable thing they do is to call skeptics ‘deniers’”

• Freeman Dyson:
  – I’m reacting against “the way [climate advocates] behave and the kind of intolerance to criticism that a lot of them have”
• Trend: skeptics -> contrarians
Conclusion

• Ethnographic methods’ stretching effects
• Reveal the experiences of modernity that underpin the U.S. climate science politics
• Are the skeptics dying off???
• Boundary-Work Approach:
  – Us versus them
  – Ignores/erases mainstream heterogeneity
  – Alienates potential allies, polarizes climate politics
  – Climategate shows: it engenders vulnerability

• Cultural Dialogic Approach
  – Seeks to avoid old conversations & discursive traps
  – Seeks resilience through diversity;
  – Broadens environmental agenda & coalition
Climategate and the virtue of the scientific community: an editorial commentary on the Maibach et al. and Grundmann opinion articles

How to cite this article:

The controversy dubbed ‘Climategate’ erupted in late 2009 exactly as diplomats around the world were preparing their positions for the negotiations at the especially high-profile 15th Conference of the Parties under the United Nations Framework Convention on Climate Change (UNFCCC). This meeting was deemed by many commentators as especially crucial for the definition of an international agreement about post-2012 measures to limit greenhouse gas emission reduction; the incident served them by intensifying critical questioning of the legitimacy of climate science underpinning the negotiations. However, Maibach et al. argue that the incident also had positive effects because it stimulated efforts at greater transparency and improvements in scientists’ communication of climate science to society, including decision makers.

Grundmann focuses on social scientists’ analy-
Climatic Change
DOI 10.1007/s10584-013-0711-x

ESSAY

Climategate: the role of the social sciences

Myanna Lahsen

Received: 11 January 2012 / Accepted: 29 January 2013 © Springer Science+Business Media Dordrecht 2013

Abstract As has been widely documented, lavishly funded media campaigns by political and financial elites and corporations with vested interests against climate policy are a central instigator of the climate backlash and a threat to democratic processes. However, it would behoove the environmental coalition, including sympathizing academics, to reflect on how they help create conditions that enable and magnify the impact of the backlash campaigns and incidents such as Climategate. This editorial argues that prevalent idealized understandings of science increase public vulnerability to backlash campaigns, and that academic analysts reinforce these understandings when they avoid to perform critical analyses of the science and scientists promoting concern about climate change.