

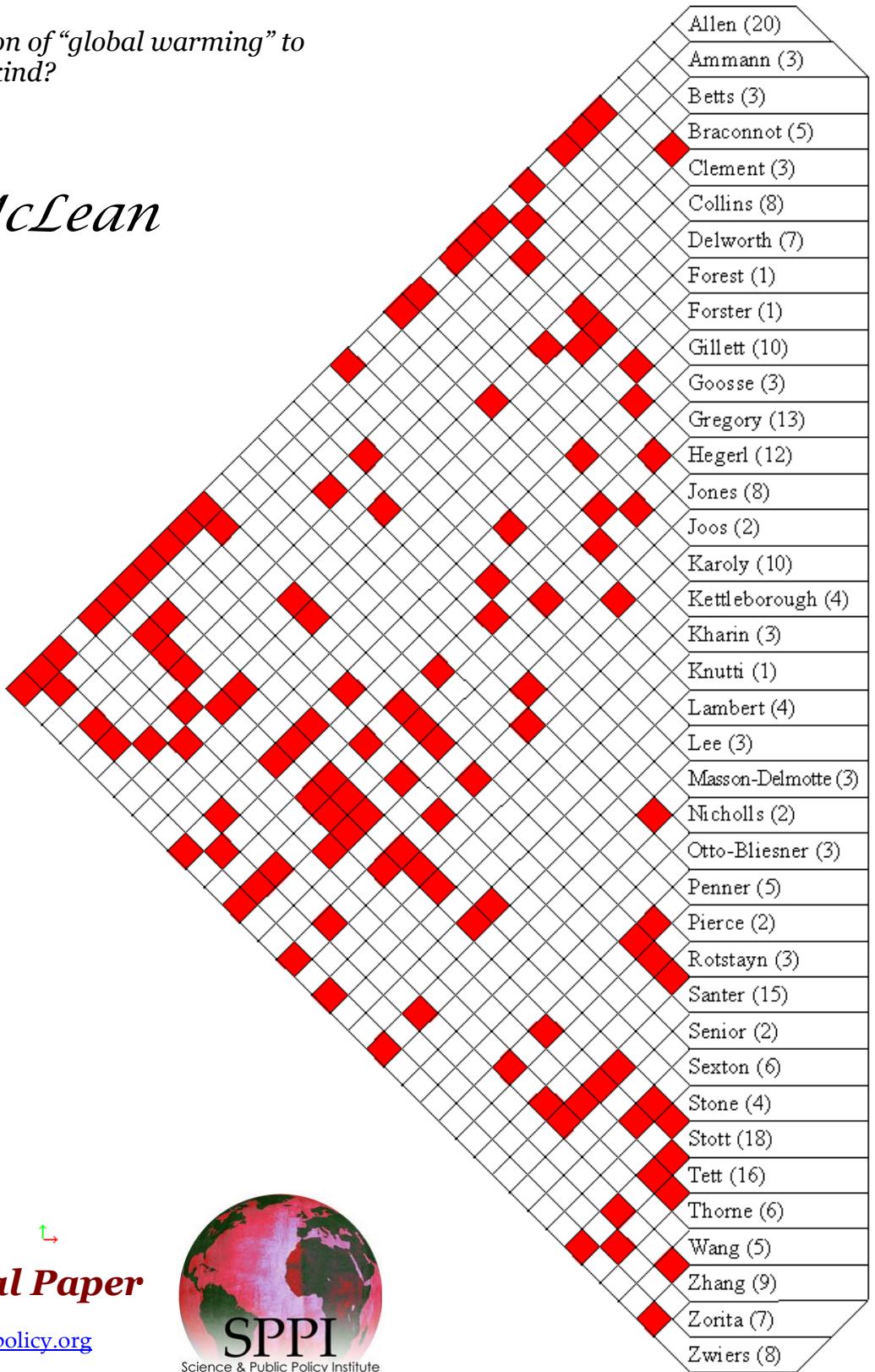
PREJUDICED AUTHORS, PREJUDICED FINDINGS

Did the UN bias its attribution of “global warming” to humankind?

by

John McLean

July, 2008



An SPPI Original Paper

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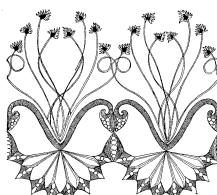


If anybody tells you in order to support his opinion that he is in possession of proof and evidence and that he saw the thing with his own eyes, you have to doubt him, even if he is an authority accepted by great men, even if he is himself honest and virtuous. Inquire well into what he wants to prove to you. Do not allow your senses to be confused by his research and innovations. Think well, search, examine, and try to understand the ways of nature which he claims to know. Do not allow yourself to be influenced by the sayings that something is obvious, whether a single man is saying so or whether it is a common opinion, for *the desire of power leads men to shameful things, particularly in the case of divided opinions.*

-- Moses Maimonides (1135 - 1204), *Medical Aphorisms*

Many scientists have long suspected that the IPCC fails to select its chapter authors with balance and fairness to all viewpoints in mind. This paper very clearly demonstrates the extent of the prejudice, in two ways: first, by showing the numerous links between the clique of authors, and secondly, by showing the numerous downright errors in the authors' approach - errors which would not have occurred in such numbers if the views of those who do not share the supposed "consensus" had been taken into account.

-- Christopher Monckton



Summary Points for Policy Makers

The IPCC is a single-interest organisation, whose charter *presumes* a widespread human influence on climate, rather than consideration of whether such influence may be negligible or missing altogether. Though the IPCC's principles also state that a wide range of views is to be sought when selecting lead authors and contributing authors, this rule has been honored more in the breach than in the observance.

More than two-thirds of all authors of chapter 9 of the IPCC's 2007 climate-science assessment are part of a clique whose members have co-authored papers with each other and, we can surmise, very possibly at times acted as peer-reviewers for each other's work. Of the 44 contributing authors, more than half have co-authored papers with the lead authors or coordinating lead authors of chapter 9.

It is no surprise, therefore, that the majority of scientists who are skeptical of a human influence on climate significant enough to be damaging to the planet were unrepresented in the authorship of chapter 9. Many of the IPCC authors were climate modelers - or associated with laboratories committed to modeling - unwilling to admit that their models are neither accurate nor complete. Still less do they recognize or admit that modeling a chaotic object whose initial state and evolutionary processes are not known to a sufficient precision has a validation skill not significantly different from zero. In short, it cannot be done and has long been proven impossible. The modelers say that the "consensus" among their models is significant: but it is an artifact of *ex-post-facto* tuning to replicate historical temperatures, of repeated intercomparison studies, and of the authors' shared belief in the unrealistically high estimate of climate sensitivity upon which all of the models assume.

The hypothesis of damaging, man-made warming is a long way from being proven – and, given the recent trend in the peer-reviewed literature, is well on the way to being disproven. Recent cooling of the planet further suggests that man-made warming is at best too weak to be detected in the "noise" of natural internal variability.

Governments have naively and unwisely accepted the claims of a human influence on global temperatures made by a close-knit clique of a few dozen scientists, many of them climate modellers, as if such claims were representative of the opinion of the wider scientific community. On the evidence presented here, the IPCC's selection of its chapter authors appears so prejudiced towards a predetermined outcome that it renders its scientific assessment of the climate suspect and its conclusions inappropriate for policy making.



Prejudiced authors, prejudiced findings

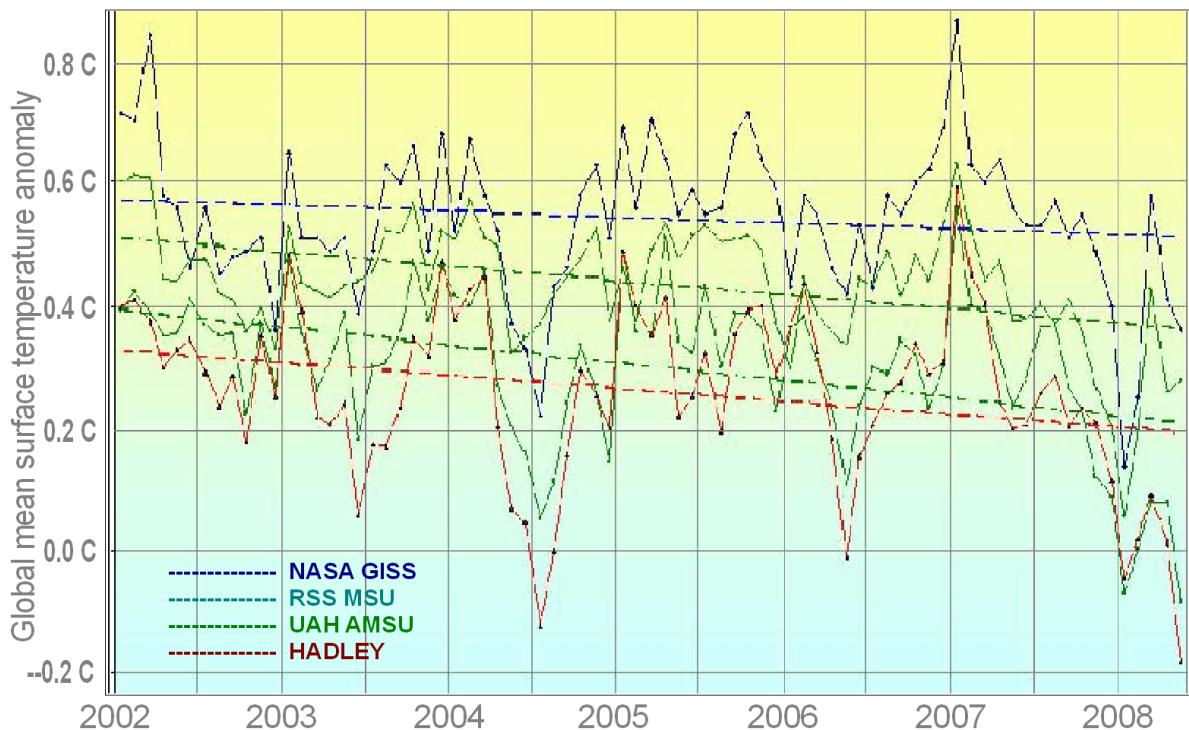
Did the UN bias its attribution of “global warming” to humankind?

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John McLean

GLOBAL MEAN SURFACE TEMPERATURE has been falling for seven years. The Goddard Institute for Space Studies, Remote Sensing Systems, the University of Alabama at Huntsville, and the Hadley Centre for Forecasting all report a firm downtrend in global temperature since late in 2001. Recent rapid global cooling, caused by the end of the strong 2006-7 El Nino followed by the intense 2007-8 La Nina, amplified by the prolonged solar minimum and the transition of the Pacific Decadal Oscillation from a warming to a cooling phase, exemplifies the strong influence of natural climate forces in setting global temperature (Figure 1):

Figure 1
Global cooling, January 2002 to May 2008



All four of the major datasets that record anomalies in global mean surface air show a pronounced downturn since late in 2001. Not one of the climate models relied upon by the IPCC had predicted this cooling. There has been no increase in worldwide temperatures since 1998. In the first five months of 2008, global temperatures were within the error-margin for temperatures in 1940.

Nonetheless, the United Nations' Intergovernmental Panel on Climate Change (IPCC) and others who share its belief in a human influence on temperature continue to insist that natural forces are merely masking an underlying pattern of dangerous anthropogenic warming.

In earlier papers, I showed that support for the contention of man-made warming was very weak among the IPCC's own official reviewers¹, and that the IPCC itself had presented little evidence to support its claim². I now turn to the question whether the IPCC's selection of chapter authors was itself prejudiced from the outset in order to produce a predetermined and self-serving outcome.

To confine the research to a reasonable compass, I have concentrated on the authorship of chapter 9, the key chapter in which the IPCC attributes observed or imagined "global warming" to humankind. My research reveals serious problems with the selection of authors, underlain by a perhaps undue faith in climate models upon which the IPCC relies for its claim that there is increasing "proof" of a human influence on climate.

Chapter 9, entitled *Understanding and Attributing Climate Change*, concludes that human-induced warming of the climate system in the past half-century is widespread and detectable in every continent except Antarctica, affecting extremes of temperature, causing glaciers and sea ice to melt, altering rainfall patterns, and perhaps increasing the intensity of tropical cyclones. This chapter was the basis not only for the IPCC's general claims about man-made "global warming" but also for the contributions from the working groups on mitigation of and adaptation to climate change.

The IPCC's very structure reflects the stipulation in its founding document that it is to take the human influence on climate as a given. It has three working parties – on climate science, on mitigation of climate change, and on adaptation to change. The 2007 report of the science working party either overlooks altogether or dismisses unanswered the growing body of evidence in the observed record and in the peer-reviewed literature to the effect that "global warming" is not occurring at the rate previously predicted by the IPCC, and is most unlikely ever to do so. The other two working parties are by their very titles compelled to start from the assumption that "global warming" is occurring, that it is our entire fault, and that we can do something about it.

The contributions of working groups II and III were developed in parallel with that from working group I, which suggests that either assumptions were made about the findings of chapter 9 or that those findings were predetermined. An alternative scenario appears in a revealing document related to the IPCC's second "scoping" meeting for its 2007 report (Potsdam, September 2003), the International Chamber of Commerce applauded the IPCC for its decision that all working groups for its 2007 report would work in parallel and noted that those on mitigation and adaptation would base their reports on that of the science working group in the IPCC's previous quinquennial assessment report, published in 2001³. If so, unless the science working group for the 2007 report was to adhere to the same working group's conclusions in the 2001 report, the two subsidiary working groups for the 2007 report would have been working on different conclusions from those of the science working group. This circumstance may well have contributed to the unwillingness of the authors of the 2007 science assessment to take proper account of the growing body of empirical evidence and peer-reviewed research since 2001 that casts strong and growing doubt upon the reliability of the 2001 report's conclusions.

Thus the authors of chapter 9 were, in effect, expected to justify the position the IPCC had been required to adopt since its foundation. They were certainly entrusted with making decisions that would be vital to the IPCC's claims and quite possibly to its future. For the IPCC's role is to assess the risks of "human-induced climate change": if there were no evidence of risk, the IPCC would have no reason to continue in existence.

So, who were the authors of this chapter that forms such a vital lynchpin of the IPCC's report? The standard IPCC procedure is to appoint Coordinating Lead Authors whose authority spans the entire chapter, with a number of Lead Authors who focus on specific sections. I shall now present the IPCC's official position on appointments in some detail, quoting from its own internal documents, and shall then demonstrate that the selection of the authors of chapter 9 and of the activities related to that chapter appears to have flouted many of the IPCC's stated policies.

¹ http://scienceandpublicpolicy.org/images/stories/papers/originals/mclean/mclean_IPCC_review_final_9-5-07.pdf

² http://icecap.us/images/uploads/IPCC_evidence.doc

³ <http://www.ipcc.ch/meetings/ar4scope/scoping-meeting2/comments3.pdf>

Appendix A to the Principles Governing IPCC Work⁴ says:

“4.2.1 At the request of Working Group / Task Force Bureau Co-Chairs through their respective Working Group / Task Force Bureau, and the IPCC Secretariat, governments, and participating organizations and the Working Group / Task Force Bureaux should identify appropriate experts for each area in the Report who can act as potential Coordinating Lead Authors, Lead Authors, Contributing Authors, expert reviewers or Review Editors. ...

“4.2.2 Coordinating Lead Authors and Lead Authors are selected by the relevant Working Group / Task Force Bureau, under general guidance and review provided by the Session of the Working Group ... from those experts cited in the lists provided by governments and participating organizations, and other experts as appropriate, known through their publications and works. The composition of the group of Coordinating Lead Authors and Lead Authors for a section or chapter of a Report **shall reflect the need to aim for a range of views, expertise and geographical representation....The Coordinating Lead Authors and Lead Authors selected by the Working Group/Task Force Bureau may enlist other experts as Contributing Authors to assist with the work.**” [Emphasis added].

In Appendix 1 of the same document the function of contributing authors is –

“To prepare technical information in the form of text, graphs, or data for assimilation by the Lead Authors into the draft section. *Comment: Input from a wide range of contributors is a key element in the success of IPCC assessments*, and the names of all contributors will be acknowledged in the Reports. Contributions are sometimes solicited by Lead Authors but unprompted contributions are encouraged.” [Emphasis added].

The report of the 21st session IPCC (Vienna, Austria, 3 and 6-7 November 2003)⁵ says –

5.4 Regarding nominations and selection of lead authors and expert reviewers the Panel **noted the need for openness and transparency, the need to aim for geographical balance, involvement of new authors and for expanding the range of disciplines involved in preparing the AR4.** [Emphasis added].

Although governments, participating organizations and the Working Group / Task Force Bureaux do indeed nominate potential contributing authors to any chapter, the final selection of authors is left to the Coordinating Lead authors and Lead Authors, who are also free to make appointments directly. Tables 1 and 2 list the authors of chapter 9 –

Table 1 **Lead authors of chapter 9 in IPCC's 2007 climate assessment**

Coordinating lead authors

HEGER, Gabriele C.	Duke University, USA
ZWIERS, Francis	Environment Canada

Lead authors

BRACONNOT, Pascale	Laboratoire des Sciences du Climat et de l'Environnement, France
GILLETT, Nathan P.	University of East Anglia, UK
LUO, Yong	China Meteorological Administration, People's Republic of China
MARENGO ORSINI, Jose Antonio	CPTEC / INPE, Brazil
NICHOLLS, Neville	Monash University, Australia
PENNER, Joyce E.	University of Michigan, USA
STOTT, Peter A.	Hadley Centre for Forecasting, Meteorological Office, UK

⁴ <http://www.ipcc.ch/pdf/ipcc-principles/ipcc-principles-appendix-a.pdf>

⁵ <http://www.ipcc.ch/meetings/session21/final-report.pdf>

Table 2
Contributing authors and review editors of chapter 9

Contributing authors

ALLEN, Myles.	University of Oxford, UK
AMMANN, Caspar	Climate and Global Dynamics Division, NCAR, USA
ANDRONOVA, Natalia	University of Michigan, USA
BETTS, Richard A.	Hadley Centre for Forecasting, Meteorological Office, UK
CLEMENT, Amy	University of Miami, USA
COLLINS, William D.	Climate and Global Dynamics Division, NCAR, USA
CROOKS, Simon	University of Oxford, UK
DELWORTH, Thomas L.	Geophysical Fluid Dynamics Laboratory, NOAA, USA
FOREST, Chris	Massachusetts Institute of Technology, USA
FORSTER, Piers	University of Leeds, UK
GOOSSE, Hugues	Catholic University of Louvain / Leuven, Belgium
GREGORY, Jonathan M.	Hadley Centre for Forecasting, Meteorological Office, UK
HARVEY, Danny	University of Toronto, Canada
JONES, Gareth S.	Hadley Centre for Forecasting, Meteorological Office, UK
JOOS, Fortunat	University of Bern, Switzerland
KENYON, Jesse	Duke University, USA
KETTLEBOROUGH, Jamie	British Atmospheric Data Centre, UK
KHARIN, Viatcheslav	Environment Canada
KNUTTI, Reto	Climate and Global Dynamics Division, NCAR, USA
LAMBERT, F. Hugo	University of Oxford, UK
LAVINE, Michael	Duke University, USA
LEE, Terry C.K.	University of Victoria, Canada
LEVINSON, David	National Climatic Data Center, NOAA, USA
MASSON-DELMOTTE, Valerie	Laboratoire des Sciences du Climat et de l'Environnement, France
NOZAWA, Toru	National Institute for Environmental Studies, Japan
OTTO-BLIESNER, Bette	Climate and Global Dynamics Division, NCAR, USA
PIERCE, David	Scripps Institute of Oceanography, USA
POWER, Scott	Bureau of Meteorology, Australia
RIND, David	NASA Goddard Institute for Space Studies, USA
ROTSTAYN, Leon	Marine and Atmospheric Research, CSIRO, Australia
SANTER, Ben. D.	Lawrence Livermore National Laboratory, USA
SENIOR, Catherine	Hadley Centre for Forecasting, Meteorological Office, UK
SEXTON, David	Hadley Centre for Forecasting, Meteorological Office, UK
STARK, Sheila	Hadley Centre for Forecasting, Meteorological Office, UK
STONE, Daithi A.	University of Oxford, UK
TETT, Simon	Hadley Centre for Forecasting, Meteorological Office, UK
THORNE, Peter	Hadley Centre for Forecasting, Meteorological Office, UK
VAN DORLAND, Robert	Royal Netherlands Meteorological Institute (KNMI), Netherlands
WANG, Minghuai	University of Michigan, USA
WIELICKI, Bruce	NASA Langley Research Center, USA
WONG, Takmeng	NASA Langley Research Center, USA
XU, Li	University of Michigan, USA
ZHANG, Xuebin	Environment Canada
ZORITA, Eduardo	Helmholtz Zentrum Geesthacht, Germany

Review editors

KAROLY, David J.	University of Oklahoma, USA
OGALLO, Laban	IGAD Climate Prediction and Application Centre, Kenya
PLANTON, Serge	Meteo-France.

Of the two co-coordinating lead authors, Gabriele Hegerl was from Duke University, USA, as were two contributing authors; and Francis Zwiers was from Environment Canada, as were two contributing authors.

Lead authors also picked their own. Pascale Brannacot was from the Laboratoire des Sciences du Climat et de l'Environnement in France, as was a contributing author. Joyce Penner was from the University of

Michigan, USA, as were three contributing authors. Two of the listed contributing authors, Wang Minghuai and Xu Li, are PhD students of lead author Joyce Penner, having no discernable direct role. Peter Stott of the Hadley Centre in the UK was in the company of no fewer than eight contributing authors from the same establishment and one more from the University of East Anglia, a close associate of the Hadley Centre. The Hadley Centre deserves special note because not only did it supply nine authors but also 9 of the 62 reviewers of this chapter." Disconcertingly, two of the Hadley Centre's contributing authors – Jones and Thorne – were among the reviewers of the chapter that they had themselves written. From this and other evidence, it is plain that the IPCC's documents are not independently peer-reviewed in the generally-accepted sense of that term.

Looking beyond chapter 9 for a moment, 37 of the UK's 79 reviewers of the science assessment report were employed by the Hadley Centre for Forecasting. The Hadley Centre's strong and perhaps undue influence is not unprecedented. In the IPCC's previous quinquennial science assessment in 2001, chapter 12 (the "attribution" chapter) had 5 of its 36 authors from the Hadley Centre - again the greatest number from a single organization. It is questionable whether a single establishment should have been permitted to exercise so much influence in what holds itself out to be a process involving the global scientific community.

Returning to chapter 9 of the 2007 science assessment, Table 3 shows that the 53 authors of chapter 9 came from just 31 organizations. Putting it another way, 30 authors of that chapter – more than half – had at least one colleague from the same establishment. Was the independence of science compromised by the collective zeitgeist of their establishments or were they deliberately drawn from such a narrow range of organizations that unanimity was effectively guaranteed in advance?

Table 3
Organizations with multiple staff authoring chapter 9

Hadley Centre for Forecasting / University of East Anglia, UK:	10
2 lead authors, 8 contributing authors	
University of Michigan, USA:	4
1 lead author, 3 contributing authors	
Climate and Global Dynamics Division, NCAR:	4
4 contributing authors	
University of Oxford, UK:	4
4 contributing authors	
Environment Canada:	3
1 coordinating lead author; 2 contributing authors	
Duke University, USA:	3
1 coordinating lead author, 2 contributing authors	
NASA Langley Research Center:	2
2 contributing authors	
Laboratoire des Sciences du Climat et de l'Environnement, France:	2
1 lead author; 1 contributing author	

Many of these contributing authors appear to have been subordinates, either academically or professionally, to lead authors of the same chapter. Most lead authors have published many papers and appear to have worked in climatology for many years, while certain contributing authors from the same establishments have published few papers and seem to be relative newcomers.

As Table 4 shows, of almost 200 nations affiliated to the IPCC only 12, or just 6%, were represented among the authors of chapter 9. Of the 53 authors, 44, or 83%, were from English-speaking countries. The United States, with 20 authors, and the UK, with 16, accounted between them for two-thirds of all the authors of chapter 9.

Table 4
Nationalities of affiliation of the authors of chapter 9

United States	20 (38%)								
United Kingdom	16 (30%)	36 (67%)	US and UK						
Canada	5 (9%)								
Australia	3 (6%)	44 (83%)	English-speaking nations						
France	2 (4%)								
China	1 (2%)								
Brazil	1 (2%)								
Belgium	1 (2%)								
Switzerland	1 (2%)								
Japan	1 (2%)								
Netherlands	1 (2%)								
Germany	1 (2%)	53	authors of chapter 9						

What scientific papers did Chapter 9's authors cite? Often, their own. Table 5 shows that, of the 534 papers cited in chapter 9, some 213, or 40 per cent, had appeared under the name of at least one chapter author⁶.

Table 5
Cited publications by each author of chapter 9

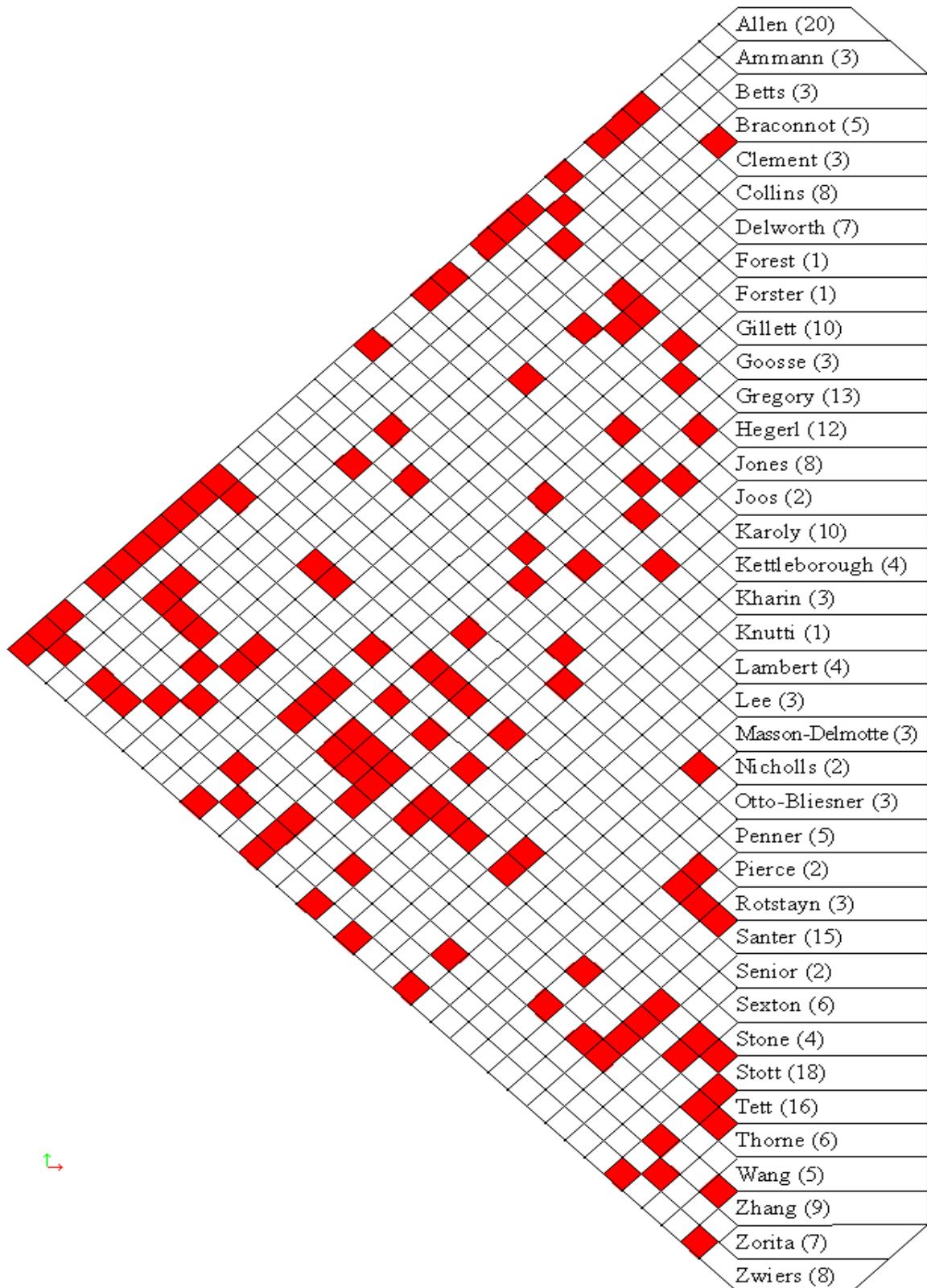
Stott	Lead	42	Allen	Contributing	36	Tett	Contributing	24
Santer	Contributing	23	Hegerl	Coordinating	22	Gillett	Lead	15
Delworth	Contributing	14	Gregory	Contributing	14	Jones	Contributing	14
Karoly	Review editor	13	Zwiers	Coordinating	11	Stone	Contributing	10
Ammann	Contributing	9	Braconnot	Lead	9	Collins	Contributing	8
Otto-Btiesner	Contributing	8	Penner	Lead	8	Sexton	Contributing	7
Zhang	Contributing	7	Rind	Contributing	6	Wang	Contributing	6
Zorita	Contributing	6	Andronova	Contributing	5	Crooks	Contributing	5
Goosse	Contributing	5	Kettleborough	Contributing	5	Nozawa	Contributing	5
Thorne	Contributing	5	Clement	Contributing	4	Joos	Contributing	4
Lambert	Contributing	4	Nicholls	Lead	4	Pierce	Contributing	4
Rotstayn	Contributing	4	Wong	Contributing	4	Betts	Contributing	3
Knutti	Contributing	3	Wielicki	Contributing	3	Forest	Contributing	2
Harvey	Contributing	2	Lee	Contributing	2	Masson	Contributing	2
Planton	Contributing	2	Senior	Contributing	2	Xu	Contributing	2
Kharin	Contributing	1	Luo	Lead	1	Power	Contributing	1
Stark	Contributing	1	Van Dorland	Contributing	1	5 authors	Contributing	0

Of the published papers cited in chapter 9, 94 had been authored by two or more of that chapter's authors. One cited paper had six chapter authors; five cited papers had five chapter authors each. Four chapter authors contributed to 10 cited papers, two of which were written entirely by authors of chapter 9. Three chapter authors contributed to 26 papers each, including 6 papers written entirely by chapter authors. Fifty of the cited papers listed 2 chapter authors each, and 10 of these papers were written entirely by chapter authors.

Myles Allen, a contributing author, co-authored papers with 20 other authors of chapter 9. Peter Stott, a lead author, co-authored papers with 18 other authors of chapter 9, and Simon Tett and Ben Santer had been co-authors with 16 and 15 other chapter authors respectively. These figures are not exclusive: Allen's co-authors, for instance, include Stott, Tett and Santer. Table 6 shows that 37 (or 70%) of the 53 authors of chapter 9, including both coordinating lead authors and five of the seven lead authors, are linked to one another through their co-authoring of published papers in the learned journals. Of the remaining 16 authors, two pairs, Crook & Nozawa and Wielicki & Wong, also co-authored papers cited in chapter 9.

⁶ It is possible that minor count errors have been made: no attempt was made to allow for changes of name, and the information presented here is based only on the papers cited in chapter 9.

Table 6
Previous co-authorships among the authors of chapter 9
Red boxes indicate co-authorships of papers cited in chapter 9



Only 12 of the 53 authors did not co-author cited papers with other authors of chapter 9: however, some of these 12 are linked by affiliation to the same institutions. Andronova and Xu, both contributing authors, are from the University of Michigan and, through that affiliation, are linked with Penner, who is among the 37

authors linked by prior publication. Sources external to chapter 9 show that both Andronova and Xu have co-authored papers with Penner, although those papers were not cited in chapter 9. Neither Kenyon nor Lavine had authored cited papers, but both are from the same establishment as coordinating lead author Hegerl. Stark did not co-author any cited paper with other chapter 9 authors, but, like 8 members of that clique of 37, she is from the Hadley Centre in the UK.

The only truly independent lead authors are Luo and Marengo-Orsini, from China and Brazil, respectively. Among the contributing authors only Harvey, Levinson, Power, von Dorland and Rind have no apparent connections to one another or to other authors of chapter 9.

The relationships between most of the authors of chapter 9 demonstrate a disturbingly tight network of scientists with common research interests and opinions. The contrast between this close-knit group and the IPCC's stated claim to represent a global diversity of views is remarkable and does not augur well for the impartiality or integrity of chapter 9's conclusions. Wegman *et al*⁷ identified a similar network of scientists in their notable critique of the now-discredited "hockey stick" 1000-year northern-hemisphere temperature graph by Mann *et al.* (1998, 1999, corrected 2004) that had featured six times, prominently, in full color and at full scale, in the IPCC's 2001 assessment report. Wegman *et al.* described a closely-connected clique among palaeoclimatologists:

"One of the interesting questions associated with the 'hockey stick controversy' are the relationships among the authors and consequently how confident one can be in the peer review process. In particular, if there is a tight relationship among the authors and there are not a large number of individuals engaged in a particular topic area, then one may suspect that the peer review process does not fully vet papers before they are published. Indeed, a common practice among associate editors for scholarly journals is to look in the list of references for a submitted paper to see who else is writing in a given area and thus who might legitimately be called on to provide knowledgeable peer review. Of course, if a given discipline area is small and the authors in the area are tightly coupled, then this process is likely to turn up very sympathetic referees. These referees may have co-authored other papers with a given author. They may believe they know that author's other writings well enough that errors can continue to propagate and indeed be reinforced."

The same sentiments apply to the clique of 37 authors of chapter 9. How many had been co-authors of papers with other members of the clique, and how often were papers by clique members reviewed by other clique members?

Under the IPCC's procedures, the coordinating lead authors and lead authors are free to select contributing authors beyond those nominated by governments. Appointing other members of this clique as contributing authors would ensure that a particular viewpoint prevailed. On the evidence presented here, this incestuous arrangement was very much in place among the authors of chapter 9, ensuring that neither the papers nor the opinions of the growing band of serious climatologists who doubt that humankind has an actually or potentially harmful influence on the Earth's climate are adequately represented in chapter 9.

Hegerl, one of the coordinating lead authors of chapter 9, had co-authored cited papers with two lead authors and eight contributing authors, as well as with Karoly, a review editor. "The other coordinating lead author, Zwiers, had co-authored cited papers with Hegerl, the same two lead authors as Hegerl, four contributing authors and with Karoly. Hegerl and Zwiers have also jointly co-authored papers. It is particularly regrettable that a review author should have had such close prior links with the co-coordinating lead authors of chapter 9.

Five of the seven lead authors of chapter 9 can be linked to contributing authors. Nicholls co-authored papers cited in chapter 9 with two contributing authors, Penner with four, Braconnot with five, Gillett with six and Stott with 14. In fact the two coordinating lead authors and seven lead authors in total co-authored papers with 23 of the 44 contributing authors of chapter 9. It is likely that further links would be discovered if the search net was widened to include all peer-reviewed scientific journals.

⁷ Wegman, E.J., D.W. Scott and Y.H. Said (2006), Ad Hoc Committee Report on the 'Hockey Stick' Global Climate Reconstruction,' available online at http://www.climateaudit.org/pdf/others/07142006_Wegman_Report.pdf

David Karoly, one of the review editors, is an author of 13 of the papers cited in chapter 9. Seven of these papers list at least one author of chapter 9. One of the cited papers co-authored by Karoly was co-authored by 5 chapter authors. Ten chapter authors, including both coordinating lead authors and three of the seven lead authors (Gillet, Stott and Penner) were co-authors with Karoly on papers cited in chapter 9. The extent of this co-authoring makes Karoly the 38th member of the network of previous co-authorship.

For the IPCC's 2001 science assessment, Karoly had been a coordinating lead author of the "attribution" chapter. His lead authors then were Hegerl, Zwiers, Marengo and Allen. The first two of these were to become coordinating lead authors of chapter 9 in the 2007 report. Marengo was probably the lead author noted in the 2007 report as Marengo-Orsini. Allen is also a contributing author of chapter 9.

The IPCC document has this to say about the role of review editors:

"4.2.4 ... Review Editors should normally consist of a member of the Working Group/Task Force Bureau, and an independent expert based on the lists provided by governments and participating organizations. Review Editors should not be involved in the preparation or review of material for which they are an editor. In selecting Review Editors, the Bureaux should select from developed and developing countries and from countries with economies in transition, and should aim for a balanced representation of scientific, technical, and socio-economic views."

The close pre-existing connections between Karoly and many of the authors of chapter 9 raise doubts about the impartiality of the review process. Even if Karoly had acted entirely objectively and independently, in the circumstances he has not been *seen to* act objectively and independently.

The IPCC document continues –

"5. ... Review Editors will assist the Working Group/Task Force Bureaux in identifying reviewers for the expert review process, **ensure that all substantive expert and government review comments are afforded appropriate consideration**, advise lead authors on how to handle contentious/controversial issues and **ensure genuine controversies are reflected adequately in the text of the Report**.

"Although responsibility for the final text remains with the Lead Authors, **Review Editors will need to ensure that where significant differences of opinion on scientific issues remain, such differences are described in an annex to the Report**. Review Editors **must submit a written report** to the Working Group Sessions or the Panel and where appropriate, will be requested to attend Sessions of the Working Group and of the IPCC to communicate their findings from the review process." [Emphasis added].

Though a certain political faction has attempted to present the notion that there is a scientific "consensus" about the human influence on "global warming", there is no such consensus among scientists in climate and related fields. Since the previous IPCC climate report in 2001, a substantial number of papers frankly skeptical of the magnitude of the human influence on climate imagined by the IPCC have been published. Similar scepticism was shown in numerous reviewers' comments for the second draft of chapter 9.

The review editors appear to have ignored this skepticism. Chapter 9 makes scant mention of the differences of scientific opinion that exist. The IPCC's procedural document contains an explicit requirement that significant differences should be described in an annex to the report. Yet, notwithstanding the absence of any scientific consensus on the magnitude of the human effect on the climate among suitably-qualified scientists, the only annex to chapter 9 deals with statistical methods.

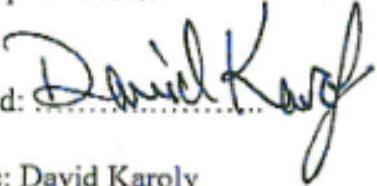
According to the IPCC regulations, the review editors were required to present a written report to the IPCC Working Group Session (see quote above). Documents made available due to FOI requests by David Holland⁸ indicate that Karoly's report, in particular, consisted of a one-sentence letter with all the hallmarks of a standard form (Figure 2) –

⁸ <http://www.climaeaudit.org/?p=2960>

Figure 2
Facsimile of a review editor's standardized *clause de style*

Dear Dr. Dahe Qin and Dr. Susan Solomon,

As Review Editor of Chapter 9 *Understanding and Attributing Climate Change* of the Working Group I contribution to the IPCC Fourth Assessment Report, "Climate Change 2007: The Physical Science Basis", I can confirm that all substantive expert and government review comments have been afforded appropriate consideration by the writing team in accordance with IPCC procedures.

Signed: 
Name: David Karoly

Date: 11/20/06

The addressees of Karoly's letter reproduced above were the co-chairmen of the IPCC's science "working group". In fact, critical review comments were overridden or ignored entirely in the review process.

As I have previously shown, the conclusions reached in chapter 9 were flawed and the evidence for them was insubstantial⁹. Did the authors believe that the evidence was credible, or could other factors have influenced their thinking?

Hegerl and Zwiers work with and develop climate models, the computer software from which climate predictions are made. The Hadley Centre and University of East Anglia, suppliers of 10 of the 53 authors of chapter 9, are likewise deeply involved with climate modeling, as are Allen of the University of Oxford and (probably) his three Oxford colleagues who also contributed to chapter 9. The US NCAR, supplier of 3 authors, also specializes in modeling. It is very likely that many other chapter 9 authors and the institutes to which they are affiliated are in the same position.

It would be unrealistic to expect that those who work with climate models would question the capability and accuracy of such models in the best of circumstances. The very heavy bias towards modelers among the authorship of chapter 9 must have largely prevented any serious questions about the competence of climate models (however sophisticated) to truly represent the future evolution of a complex, non-linear, chaotic object such as the climate. Indeed, it has been known since Lorenz (1963) that the initial state of the climate can never be known to a sufficient precision to allow reliable projections of its future evolution beyond a few days or weeks.

The IPCC's 2001 climate assessment played into the hands of the modelers when it said -

"... From a practical perspective, attribution of observed climate change to a given combination of human activity and natural influences requires another approach. This involves statistical analysis and the careful assessment of multiple lines of evidence to demonstrate, within a pre-specified margin of error, that the observed changes are:

- "unlikely to be due entirely to internal variability;
- "consistent with the estimated responses to the given combination of anthropogenic and natural forcing; and
- "not consistent with alternative, physically plausible explanations of recent climate change that exclude important elements of the given combination of forcings."

⁹ "The IPCC's dubious evidence for a human influence on climate" online at http://icecap.us/images/uploads/IPCC_evidence.doc

This statement would only be reasonable if climatologists had perfect knowledge of the initial state of the climate system, and of the processes by which it evolves. The first and most critical requirement is beyond any climate model, as the IPCC admitted in 2001 and again in 2007.

The words "model" and "models" appear a total of 628 times in the 70 pages of chapter 9, demonstrating how heavily the IPCC relies upon modeling for its findings.

Chapter 9 does comment on the accuracy and completeness of climate models –

"Incomplete global data sets and remaining model uncertainties still restrict understanding of changes in extremes and attribution of changes to causes." [p. 666]

"Detection of anthropogenic influence is not yet possible for all climate variables for a variety of reasons. Some variables respond less strongly to external forcing, or are less reliably modelled or observed."¹⁰ [p. 669]

"Detection and attribution analyses show robust evidence for an anthropogenic influence on climate. However, some forcings are still omitted by many models and uncertainties remain in the treatment of those forcings that are included by the majority of models." [p. 692]

However, these admitted deficiencies did not deter the authors of chapter 9 from presenting the output of climate models as if it was evidence of man-made warming. Modeling is not evidence of anything, particularly when it is a chaotic object that is being modeled.

Even then, it is only by the crudest of statistical prestidigitation that the authors of chapter 9 are able to reach their dubious conclusion that, in effect, the continuance in the past half-century of a warming trend that began a quarter of a millennium before humankind could have exercised any influence over the climate is caused by humankind. Among the questionable devices deployed in chapter 9 are the following –

First, chapter 9 asserts that historical annual mean temperatures are *consistent with* the climate models. However, the models have repeatedly been tuned *ex post facto* so as to reproduce phenomena (such as the cooling between 1940 and 1975) which they had not previously reproduced, so it is no surprise that – with the benefit of hindsight – the modelers have been able to force their models to replicate the observed climate. That process, however, cannot be relied upon to produce reliable projections for the future.

Secondly, the projections that are the output of the models are Delphic in their lack of specificity. When 58 simulations performed by 14 climate models deliver results often varying by more than 0.5 degrees Celsius (1 F; see, for instance, chapter 9, figure 9.5, p. 684), it is unsurprising that average global temperature falls within the range of outputs of the multitude of model simulations.

Thirdly, chapter 9 sets great store by "intercomparison studies" between the outputs of different climate models, implying that a "consensus" among climate models somehow constitutes scientific truth. William Briggs,¹⁰ a statistician, has shown that a consensus is to be expected between models because they share similar mathematics, because knowledge is exchanged within the modeling fraternity, because models are deliberately tuned to match historical temperatures (Akasofu, 2008), and because any model that did not come close to reality would be discarded. The conditions precedent to "consensus" among models are thus in place even before the models start processing the data.

Fourthly the authors of chapter 9 turn the scientific method on its head, stating or implying at many points that correlation implies causation. This is a well-known informal fallacy of logic, a variant of *post hoc ergo propter hoc*. It is generally true that *lack of correlation* necessarily entails *lack of causation*, but it is false that correlation necessarily entails causation. For instance the fact that atmospheric carbon dioxide concentration and global temperatures have both risen in the past half century does not necessarily imply either that the greater concentration of carbon dioxide caused the increase in temperature or that the increase in temperature caused the concentration of carbon dioxide to increase. Whenever two datasets appear to be correlated,

¹⁰ see <http://wmbriggs.com/blog/2008/04/08/why-multiple-climate-model-agreement-is-not-that-exciting/>

causation of one by the other cannot be inferred until all possible causes extraneous to both have been considered and eliminated.

Chapter 9 makes several dubious claims that deserve a response. Here are just a few."

"The fact that no coupled model simulation so far has reproduced global temperature changes over the 20th century without anthropogenic forcing is strong evidence for the influence of humans on global climate. [pg 704] ... In addition, simulations forced with observed SST changes cannot fully explain the warming in the troposphere without increases in greenhouse gases, further strengthening the evidence that the warming does not originate from the ocean." [p. 727]

An alternative and more plausible explanation is that the climate models are incomplete or inaccurate. Not one of the models predicted the stasis in global mean surface temperature since 1998, or the fall since late 2001. Some of the IPCC's supporters have said that the current drop in temperatures is merely a temporary fluctuation consistent with natural variability of the climate, and that "global warming" will eventually resume, perhaps in 2015 (Keenlyside *et al.*, 2008, vol. 453, 84-88). However, the IPCC and the fabricators of its models have always insisted that the role of natural variability in the climate is minuscule. If so, then they and their models are unable to explain the current fall in global temperature.

"The ability of models to simulate many features of the observed temperature changes and variability at continental and sub-continental scales and the detection of anthropogenic effects on each of six continents provides stronger evidence of human influence on climate than was available to the [2001 report]." [p. 694]

The output of a model might be acceptable evidence if it could be shown that the model was accurate in all respects and that there was no other plausible explanation. Throughout chapter 9 there is little recognition that the output of models should be taken as no more than indicative. What has been "detected" on each of six continents is a long-run trend of increasing temperature. However, the models are not capable of distinguishing between natural and anthropogenic temperature changes, because the climate sensitivity to anthropogenic emissions of carbon dioxide is an *input* to the models, not an *output* from them (Akasofu, 2008). The models are told at the outset to assume high climate sensitivity: without this assumption, it would not be possible to ascribe any temperature increase to humankind at all.

"A Bayesian analysis of seven climate models (Schnur and Hasselman, 2005) and Bayesian analyses of MMD 20C3M simulations (Min and Hense, 2006a,b) find decisive evidence for the influence of anthropogenic forcings." [p. 689]

Bayesian analysis is a method of evaluating statistical probabilities. The analysis is not, as the IPCC says, an analysis of the models themselves but of their output. However, since it is the *inputs* to the models that determine the extent of the imagined human influence on climate, analyzing the *outputs* to determine the extent to which they demonstrate anthropogenic influences is meaningless and futile. All it indicates is that the models all make similar assumptions, whose validity Bayesian probabilities are entirely unable to verify. Besides, it is not appropriate to apply any form of probability theory (especially Bayesian probabilities) to the behavior of a chaotic object whose initial state and evolutionary processes are not known to a sufficient degree of precision.

"Schär *et al.* (2004) show that the central European heat wave of 2003 could also be consistent with model-predicted increases in temperature variability due to soil moisture and vegetation feedbacks. [p. 699] ... Based on a single study, and assuming a model-based estimate of temperature variability, past human influence may have more than doubled the risk of European mean summer temperatures as high as those recorded in 2003." [p. 704]

However, chapter 3 of the IPCC's 2007 climate assessment makes it explicit that the 2003 heat wave in Europe arose from a well-understood natural meteorological phenomenon – a stationary high-pressure cell spreading warm air from North Africa across Western Europe. The IPCC has rightly made it repeatedly plain that the attribution of individual extreme-weather events to anthropogenic "global warming" is not possible. Nor is it appropriate to base conclusions about individual extreme-weather events on an exaggerated interpretation of a single academic study.

“Confidence [in the models’ assessment of internal climate variability] is further increased by systematic intercomparison of the ability of models to simulate the various modes of observed variability (Chapter 8), by comparisons between variability in observations and climate model data (Section 9.4) and by comparisons between proxy reconstructions and climate simulations of the last millennium (Chapter 6 and Section 9.3). ... Furthermore, because detection studies are statistical in nature, there is always some small possibility of spurious detection. The risk of such a possibility is reduced when corroborating lines of evidence provide a physically consistent view of the likely cause for the detected changes and render them less consistent with internal variability.” [p. 668]

Professor Richard Lindzen, who attended the sessions that led to the IPCC’s 2001 climate assessment, subsequently reported in testimony to the US Senate that officials of the IPCC at those sessions had circulated frequently among the groups of chapter authors, trying to persuade them that basing the entire case for climate alarm on computer modeling was an acceptable technique.

The above-quoted passage from chapter 9 is yet another instance of the IPCC’s undue and often naive reliance upon modeling rather than upon theory and observation. As I have previously noted, intercomparison studies tend to embed errors systematically throughout all the models.

“The warming [from 1976 to 1998] occurred in both the ocean and the atmosphere and took place at a time when natural external forcing factors would likely have produced cooling.” [p. 665].

This statement characteristically ignores the fact that warming can be, and often is, caused by internal events, such as El Nino ocean oscillations like that which caused the global temperature peak in 1998. El Nino conditions have dominated the oceans and hence the climate since the mid-1970s, when the Pacific Decadal Oscillation moved into its warm phase. Contrary to the above quote, such conditions would likely have produced warming.

These unsatisfactory passages from chapter 9 demonstrate that the prejudice to be expected given the asymmetries and biases in the selection of chapter authors and reviewers is indeed present throughout the text. Chapter 9 is not science but politics elaborately dressed up as though it were science.

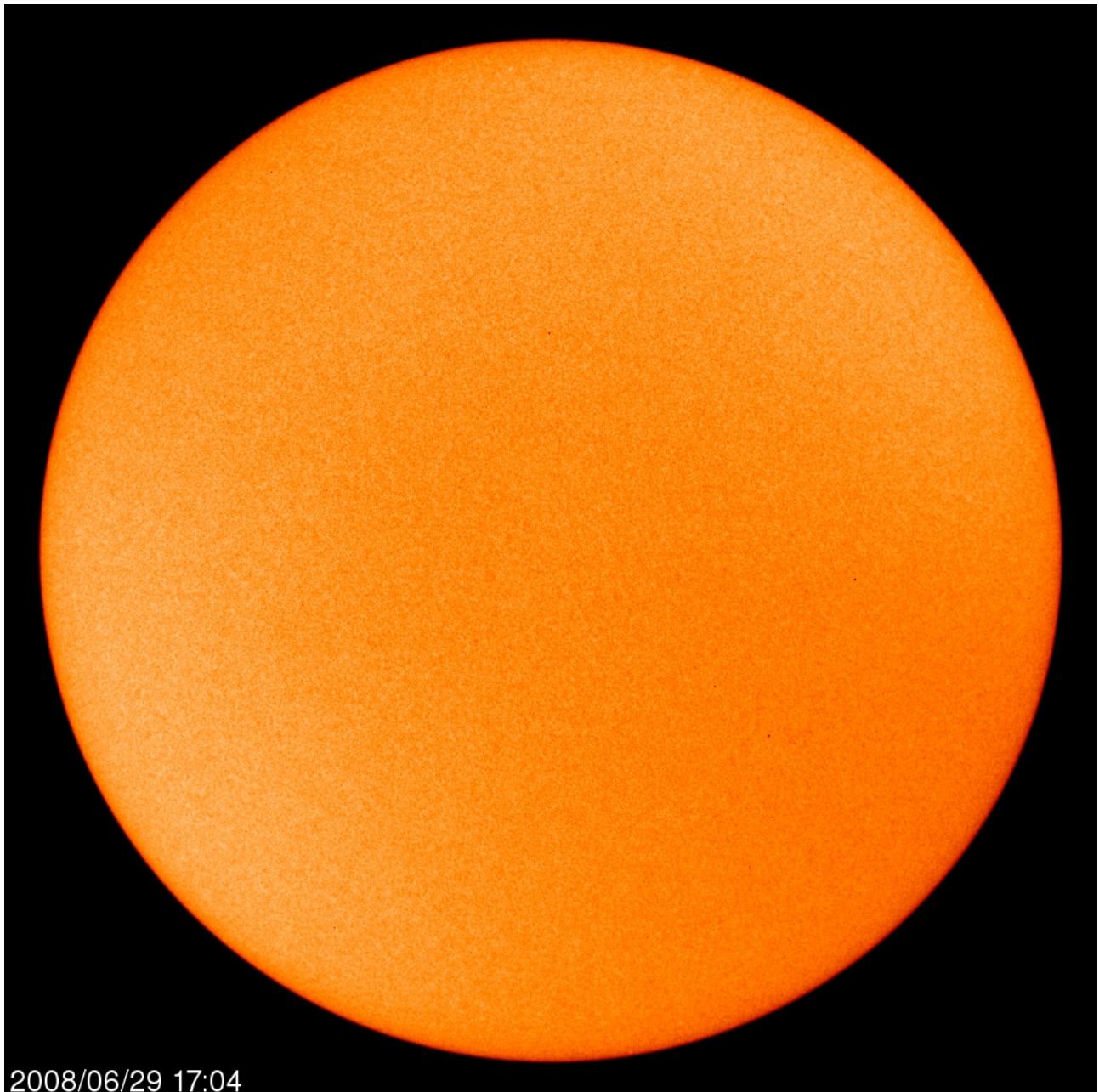
The IPCC’s arguably apparent exclusion of scientists who had sufficient knowledge, impartiality, and integrity to prevent the numerous fundamental errors of science in chapter 9 has led to a statistically-valueless attribution of the 1976-1998 “global warming” to humankind, when, on the evidence, it was merely the continuation of a natural warming trend that had set in some 300 years previously as solar activity recovered at the end of the Maunder Minimum.

That warming trend may now have ceased. During the 70 years from the 1930s to the 1990s, the Sun was more active, and for longer, than during almost any similar period over the past 11,400 years (Solanki *et al.*, 2005).

However, the current 11-year solar cycle has got off to a slow start unprecedented since satellite observations began 30 years ago. Most days, no sunspots are visible on the solar surface, and the magnetic convection currents below the surface are inferred to have slowed considerably, presaging a global cooling that may begin in about a decade and continue for most of this century.

The IPCC tends to ignore such considerations. Its 2007 report chose an absurdly low estimate of the effect of solar variation on changes in global surface temperature, flying in the face of generations of data demonstrating a link between sunspots and terrestrial temperature. It was the astronomer Herschel, in 1801, who noticed an inverse correlation between the 11-year sunspot cycle and the price of grain as listed in a table in Adam Smith’s *Inquiry into the Nature and Causes of the Wealth of Nations*. Though correlation does not necessarily imply causation, there are good reasons for supposing that the Sun has a larger influence on the temperature of the solar system than the IPCC is willing to admit. “Global warming” has been observed or inferred not only on Earth but also on Mars, on Jupiter, on Neptune’s largest moon, and even on distant Pluto. Inferentially, the large, yellow object that gives the Solar system its name may have something to do with this simultaneous “global warming” on so many planets. Certainly, it would be rash to attribute extraterrestrial warming to anthropogenic enrichment of Earth’s atmosphere with carbon dioxide.

Figure 3
The spotless Sun



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A recent image of the Sun, showing no sunspots at all. For more than two years, sunspots have been intermittent. Though the first reversed-polarity, high-latitude sunspot of the new solar cycle was observed on 4 January 2008, there have been very few new-cycle sunspots since then, and there were none at all from mid-April to end-June 2008. This solar inactivity, following a period of intense solar activity almost without precedent in the 11,400 years since the end of the last Ice Age, presages cooler weather to come. To solar physicists, unlike the IPCC's CO₂-obsessed alarmists, the global cooling of the past seven years is unsurprising. The Sun is less busy, so the Earth begins to cool.

The hypothesis of damaging, man-made warming is a long way from being proven – and, given the recent trend in the peer-reviewed literature, is well on the way to being disproven. Recent cooling of the planet further suggests that man-made warming is at best too weak to be detected in the “noise” of natural internal variability.

To sum up, the IPCC is a single-interest organisation, whose charter assumes a widespread human influence on climate, rather than consideration of whether such influence may be negligible or missing altogether. Though the IPCC's principles also state that a wide range of views is to be sought when selecting lead authors and contributing authors, this rule has been honored more in the breach than in the observance.

More than two-thirds of all authors of chapter 9 of the IPCC's 2007 climate-science assessment are part of a clique whose members have co-authored papers with each other and, we can surmise, very possibly at times acted as peer-reviewers for each other's work. Of the 44 contributing authors, more than half have co-authored papers with the lead authors or coordinating lead authors of chapter 9.

The IPCC appointed as review editor for chapter 9 a person who was not only a coordinating lead author for the corresponding chapter of the previous assessment report but had also authored 13 of the papers cited in chapter 9 and had co-authored papers with 10 authors of chapter 9 including both coordinating lead authors and three of the seven lead authors.

It is no surprise, therefore, that the majority of scientists who are skeptical of a human influence on climate significant enough to be damaging were unrepresented in the authorship of chapter 9. Most of the IPCC authors were climate modelers unwilling to admit that their models are neither accurate nor complete. Still less do they recognize or admit that modeling a chaotic object whose initial state and evolutionary processes are not known to a sufficient precision has a validation skill not significantly different from zero. In short, it cannot be done and has long been proven impossible. The modelers say that the "consensus" among their models is significant: but it is an artifact of *ex-post-facto* tuning to replicate historical temperatures, of repeated intercomparison studies, and of the authors' shared belief in the unrealistically high estimate of climate sensitivity upon which all of the models rely.

It cannot be repeated too often that the supposed anthropogenic effect on global temperature is not an output from the models but an input to them. For this reason, they are wholly unable to shed any light whatsoever on the extent – if any – to which humankind may be altering the climate. The output of climate models, singly or as a group, is not evidence of anything. At best, it might be indicative, but it can never be conclusive.

Governments have naively and unwisely accepted the claims of a human influence on global temperatures made by a close-knit clique of a few dozen scientists, many of them climate modellers, as if such claims were representative of the opinion of the wider scientific community. On the evidence presented here, the IPCC's selection of its chapter authors appears so prejudiced towards a predetermined outcome that it renders its scientific assessment of the climate suspect and its conclusions inappropriate for policy making.



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