

Strange Scholarship in the Wegman Report

A Façade for the Climate Anti-Science PR Campaign

John R. Mashey*

09/26/10, V1.0

This report offers a detailed study of the “Wegman Report”: Edward J. Wegman, David W. Scott, Yasmin H. Said, “AD HOC COMMITTEE REPORT ON THE ‘HOCKEY STICK’ GLOBAL CLIMATE RECONSTRUCTION” (2006), republicans.energycommerce.house.gov/108/home/07142006_Wegman_Report.pdf.

It has been key prop of climate anti-science ever since. It was promoted to Congress by Representatives Joe Barton and Ed Whitfield as “independent, impartial, expert” work by a team of “eminent statisticians.” It was none of those. A Barton staffer provided much of the source material to the Wegman team.

The report itself contains numerous cases of obvious bias, as do process, testimony and follow-on actions.

Of 91 pages, 35 are mostly plagiarized text, but often injected with errors, bias and changes of meaning.

Its Bibliography is mostly padding, 50% of the references uncited in the text. Many references are irrelevant or dubious. The team relied heavily on a long-obsolete sketch and very likely on various uncredited sources.

Much of the work was done by Said (then less than 1 year post-PhD) and by students several years pre-PhD.

The (distinguished) 2nd author Scott wrote only a 3-page standard mathematical Appendix. Some commenters were surprised to be later named as serious “reviewers.” Comments were often ignored anyway. People were misused.

The Wegman Report claimed two missions: #1 evaluate statistical issues of the “hockey stick” temperature graph, and #2 assess potential peer review issues in climate science. For #1, the team might have been able to do a peer-review-grade statistical analysis, but in 91 pages managed not to do so. For #2, a credible assessment needed a senior, multidisciplinary panel, not a statistics professor and his students, demonstrably unfamiliar with the science and as a team, unqualified for that task. Instead, they made an odd excursion into “social network analysis,” a discipline in which they lacked experience, but used poorly to make baseless claims of potential wrongdoing.

In retrospect, the real missions were: #1 claim the “hockey stick” broken and #2 discredit climate science as a whole. All this was a façade for a PR campaign well-honed by Washington, DC “thinktanks” and allies, under way for years.

Most people can just read the 25-page main discussion, but 200+ pages of backup text are included to provide the necessary documentation, as some issues are potentially quite serious.

*Dr. Mashey is an easy-to-Google computer scientist. He has worked with a wide variety of scientists, many of whom have used software or hardware he helped create. So do most readers, given software features found on many computers and microprocessors used to implement much of the Internet. In 1988 he cofounded SPEC, which set new standards for disclosure, objectivity and cooperation in

(often-contentious) computer performance evaluation, widely used to design computers since. For the last few years he has been studying climate science, anti-science and energy issues. There are bound to be errors, please report them. There likely will be updates, as this story is not over. Contact: JohnMashey (at) yahoo.com.

Contents

Front matter

Contents	2
Executive Summary	3
Brief background	5
Advice on reading this report	6
Glossary and some key people	7
Index - Memes, Themes, notable references	8
Color codes	9
Memes and Themes	10
Reference page for Memes, Themes, other codes	12

Main discussion

1	Background	13
1.1	Attack on the hockey stick	13
1.2	Trends – natural and human factors	14
1.3	Hockey sticks in the IPCC	15
1.4	Why do people care about the shaft?	16
1.5	Evidence versus presentation	17
2	Wegman report, from bottom to top	18
2.1	Important papers - bad summaries	18
2.2	Bibliography – padded and strange	19
2.3	Literature review	20
2.4	Reconstruction – strange graphs	20
2.5	Social Network Analysis	21
2.6	The rest of the WR	21
2.7	Page tally	22
2.8	Comments, but hardly reviews	23
2.9	Moving on, or not	23
2.10	The PR campaign	24
3	History and helpers, behind the façade	25
3.1	Plausible strategies	25
3.2	WR, as presented, contradictions	25
3.3	The façade and its construction	27
3.4	Strategy behind the façade, evidence	32
4	Issues, legal and otherwise	33
5	Conclusions	36
	Acknowledgements	37
	Bibliography	37

Appendices

A.0	From source to WR and beyond	47
A.1	Comments, but not reviews	49
A.1.1	NRC Panel Led by Gerald North	49
A.1.2	WR Background	49
A.1.3	WR Testimony	50
A.1.4	Response to Stupak	54
A.1.5	WR “Reviewers” or commenters	56
A.2	GW, but never AGW	61
A.3	Time to Move On?	63
A.4	Wegman at NCAR, October 2007	67
A.5	Integrated chronology and related notes	71
A.6	Wegman social network, a few subnets	73
A.6.1	Students and co-authors	73
A.6.2	IFNA – Interface Foundation of NA	76
A.6.3	ACAS, Interface Conferences	77
A.6.4	Interface 2010	80
A.6.5	Odd loose ends at Wiley Interscience	83
A.7	Funding, pro bono, or not	84
A.8	ASA Ethical Guidelines	86
A.9	Said dissertation	87
A.10	Possible legal issues	88
A.11	Modified and disappeared files	89
A.11.1	History	89
A.11.2	Said 2007 colloquium KEY SOURCE	91
A.12	McShane, Wyner (2010), WR remake, AOAS	96
A.12.1	August 2010, a new paper (MW)	96
A.12.2	Plagiarism, fabrication and confusion	98
A.12.3	Bibliography	100
A.12.4	Comments on text	101
A.12.5	Background, possible connections	108
A.12.6	MW, behind the new façade	112
A.12.7	Changes between 1 st , 2 nd versions	113

Annotated Wegman Report, derivatives

W.0.	Executive Summary	114
W.1	Introduction	115
W.2	Background	116
W.2.1	Background on Paleoclimate Temp.	116
W.2.2	Background on Princip. Components	117
W.2.3	Background on Social Networks	118
W.3	Literature Review	129

W.4	Reconstructions & Exploration of PC Methodologies	134
W.4.1	Where is real statistical analysis?	134
W.4.2	Obsolete graph, distorted, well-used	136
W.4.3	Boreholes and odd MM references	138
W.4.4	Odd graphs in MM03, MM05x	140
W.5	Social Networks in WR and successors	143
W.5.1	Introduction to relevant fields	143
W.5.2	WP unfamiliarity with SNA	144
W.5.3	Social networks analysis in WR	146
W.5.4	Testimony	146
W.5.5	Wegman Reply to Stupak	146
W.5.6	Said, Wegman, Sharabati, Rigsby	148
W.5.7	Sharabati dissertation	152
W.5.8	Figure 5.8 of WR	153
W.5.9	Figure 5.9 of WR	157
W.5.10	Rezazad dissertation	159
W.6	Findings	160
W.7	Conclusions and Recommendations	164
W.8	Bibliography	165
W.8.1	Overview and Categorization	165
W.8.2	Bibliography Tally	166
W.8.4	References omitted from Summaries	169
W.8.5	Strangely uncited references	170
W.8.6	Strange omissions from Bibliography	170
W.8.7	Strangely unnoticed earlier attacks	170
W.8.8	Comments on notable references	171
W.8.9	MM05x, THE KEY SOURCE	185
W.9	App. A. Math. Underpinnings of PCA	187
W.10	App. B. Request ... Chairman Boehlert	187
W.11	App. C. Summaries of Important Papers	189
W.11.1	Summarization practices	189
W.11.2	Description of comparisons	189
W.11.3	Text analysis of WR Summaries	191
W.11.4	Summaries issue tally	193
W.11.5	Comments on Summaries	196
W.11.6	Strange inclusions in Summaries	198
W.11.7	Strange or trivial changes	199
W.11.8	Side-by-Side Comparisons	200
	Version History, Reminders of Issues	250

Executive Summary

Climate science yields increasingly-stronger scientific results, but obscured by an ever-louder anti-science PR campaign, of which a key part remains the 2006 “Wegman Report,” led by Edward Wegman. It was heavily promoted to the US Congress by Representatives Joe Barton (R-TX) and Ed Whitfield (R-KY) as “independent, impartial, expert” work by a team of “eminent statisticians” to analyze the climate “hockey stick.”

Although problems were clear upon its release, to this day some still reference it positively or even authoritatively, such as:

- Recent books, a quick sample: US (6), UK(2), Canada(1), Australia (1)
- Submissions (6) to UK Parliament, February 2010, on “Climategate”
- Websites and blogs, including some with large, worldwide readership
- Steady streams of articles, one recently in a real statistics journal

In 2009/2010 Canadian blogger “Deep Climate” (DC) discovered some serious problems, starting with plagiarism. That inspired my longer investigation, which kept growing as interconnected problems multiplied, starting with basic scholarly practice, requiring little specific knowledge.

Quality of basic scholarship?

- Of 91 pages, 35 are mostly plagiarized, but injected with biases, errors or changed meanings that often weaken or invert original results. Some might thus also be called fabrication. DC found 10 pages that plagiarize uncredited sources. Then 25 pages summarize papers, but with extensive plagiarism. Text of “striking similarity” to the originals totals 81% of the words, but 50% is word-for-word identical, cut-and-paste.
- Obvious plagiarism needs so little explanation that fabrications are not generally enumerated, especially as some errors might be attributed to incompetence. Either issue is taken seriously in academe.
- One major fabrication does stand out. It is a distortion of an sketch already obsolete by 1992, but supported strongly and used repeatedly.
- Of 80 references, 40 are not even mentioned (cited) in the text, but just pad the Bibliography. Many are irrelevant or dubious, such as a tabloid writer’s 1987 ozone article in a fringe technology magazine.
- Much of this is a science-seeming façade for a few key PR messages. Many of the science papers, even ones summarized, are mostly ignored. The team really only paid attention to a few papers.

Wegman team – independent?

- Barton and Whitfield rejected an offer of a normal National Research Council (NRC) report, then recruited Wegman via an obscure route likely to find a team to produce the desired results.
- Barton staffer Peter Spencer selected the team’s papers or passed them from those behind the PR campaign, local “thinktanks” or close allies.
- At least one of those allies worked directly with the Wegman team.

Wegman team – impartial?

- They ignored standard good practices, but repeated many common anti-science PR messages, most from a well-evolved PR campaign by thinktanks, their allies and a few members of Congress.
- They spent many pages on science-seeming camouflage, but the key messages can all be found in a May 2005 thinktank talk.
- They denigrated the work of relevant climate scientists, never talked to any and often avoided their credible (but inconvenient) results.
- Pervasive bias is especially obvious in highlighted side-by-side comparisons with plagiarized sources. Changes leap off the page.

Wegman team – expert?

- Wegman and 2nd author David W. Scott, are clearly distinguished, but Scott wrote only a 3-page Appendix of standard mathematics.
- Much of the writing, perhaps even most, was done by the 3rd author, Wegman student Yasmin H. Said, PhD Spring 2005.
- The report acknowledged 2 more Wegman students, not yet PhDs.
- Although they discussed statistics, the team offered no useful new statistical analysis. They avoided doing the obvious “right one.” Casting doubt via statistics discussion was the key mission #1.

Many issues are described in the attached report on the Wegman Report, its associated testimony and related actions. A 25-page discussion should suffice for most readers to understand the clear, if harsh result:

From start to finish, this entire effort was created to mislead the US Congress, the USA and the rest of the world. It still is used that way. This is backed by a mass of interconnected evidence in 200+ pages of Appendices. The team and its report simply do not match the claims made to Congress. The discussion is US-centric, but affects everyone, as the world’s climate anti-science effort really is centered in Washington, DC.

The Wegman Report's own review process.

- Whitfield claimed it was peer-reviewed. It was not.
- Wegman and others claimed this to be like a NRC report. It was not. The NRC uses a rigorous process run by independent monitors. Report writers and anonymous-at-the-time reviewers are chosen to cover all relevant disciplines. All commit to serious effort on a clear schedule. Barton and Whitfield rejected this standard process.
- Wegman sent the report to a few statisticians, of varying degrees of closeness, but all known to him. Some were given only a few days to comment on a long report covering unfamiliar topics. Some gave strong advice that was simply ignored.
- Some were later surprised to find themselves claimed as reviewers. Fine statisticians' names were mis-used to lend unwarranted credibility.

Mis-use of social network analysis against climate peer review.

- With little expertise in such analysis, the Wegman team plagiarized textbooks, then used incomplete analysis to make flawed claims.
- They claimed that coauthorship implied poor peer review, even wrongdoing, but with no evidence whatsoever.
- The team was poorly qualified to evaluate peer review in climate research, but key mission #2 was to cast doubt, which they did.
- In 2007, Said, Wegman and 2 students re-used the plagiarized text to attack climate peer review, in a statistics journal that generally does not cover social network analysis. Their badly-flawed paper was accepted in 6 days, compared to an average of 200. Wegman was a 20-year advisor. Said was an Associate Editor. That may be coincidence.
- That paper acknowledged financial support from 3 US Federal research contracts, none of which had obvious relevance.

Plagiarism and awards among Wegman PhD students

- The Wegman Report's social networks text was re-plagiarized twice more, by Wegman students receiving PhDs in 2008 and 2009.
- Said's 2005 dissertation has 5 other pages of plagiarism, with a cut-and-paste "style" quite like the 35 known in the Wegman Report.
- All 3 dissertations received departmental "Best of year" awards.

Wegman and Said after the Wegman Report.

- Promises were made in 2006 of forthcoming peer-reviewed statistics papers in various journals, but these never appeared.

- For at least 2 years, Wegman reiterated doubt-raising claims, often speaking to audiences likely to lack relevant topical expertise.
- An exception was a 2007 workshop for top statisticians and climate scientists. It was not well-received. His talk showed ignorance of basics and parts might have been thought offensive. He also (mis-)used without acknowledgement 3 slides of the scientist most often attacked.
- Wegman and Said co-chaired a June 2010 statistics conference. At the last minute, they added 2 new sessions, inviting 3 non-statisticians known for climate anti-science. Said gave a "Climategate" talk decrying climatologists' bad peer review, destruction of data, etc.
- Said's 2005 dissertation has long been online, as has her 2007 talk, which unwittingly revealed important facts. In August 2010, both files disappeared and mention of the 2nd edited out of the seminar history.

McShane, Wyner - August 2010 "remake" of the Wegman Report

- A new statistics paper has just appeared, to wide acclaim by those fond of the Wegman Report, on which it relies heavily, but from which it plagiarizes earlier errors plus text Wikipedia text. It fabricates a citation to one of the Wegman Report-plagiarized books. It fabricates several other citations. It uses obsolete sources. Errors are pervasive. Unlike the Wegman Report, it at least offers some actual statistical analyses, although serious problems have been documented with them, too.
- Some newspapers touted the Wegman Report and now the remake. Within weeks, The Daily Telegraph (UK), The Wall Street Journal, and The Australian all ran pieces in its praise, clearly competent PR.

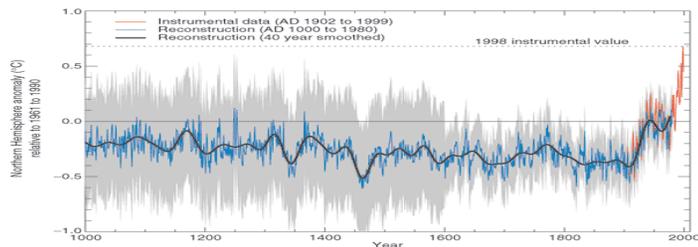
Recommendations.

George Mason University ought to investigate many problems, as should several other universities and journals, the US Office of Research Integrity and perhaps the American Statistical Association (ethics issues). At least 4 agencies may have possible fund mis-uses to consider. Some authors or publishers might pursue copyright issues. Congress and the DoJ should investigate the manufacture of the Wegman Report. Possible felonies are covered by the US Code, 18.U.S.C §1001 (misleading Congress), §371 (conspiracy), §4 (misprision), which might involve many more people. The report lists about 30 issues, not all for Wegman Report itself, but including derivations and related activities.

All this is strange. I do not think most statisticians try to lie with statistics.

Brief background

The Intergovernmental Panel on Climate Change Third Assessment Report (2001) displayed the following chart, soon known to many as the “hockey stick,” derived from 1998/1999 papers by researchers Michael Mann, Raymond Bradley, and Malcom Hughes (MBH).



Of the huge number of climate science papers, it offered a simple, graphic understandable by the general public. As a compelling expression of Anthropogenic Global Warming (AGW), it was immediately attacked by people wishing to avoid CO₂ restrictions.

Following a 1998 strategy created with the American Petroleum Institute, the Washington, DC-area “thinktanks”¹ Competitive Enterprise Institute (CEI), George C. Marshall Institute (GMI) and others (collectively, TT) had been recruiting “new faces” to speak against climate science. In 2001 they connected with Canadian economist Ross McKittrick, sponsoring him to speak in Washington. The 2002 actions included a key political strategy memo, several papers and a book coauthored by McKittrick.

Retired mining consultant Steven McIntyre began to collaborate with McKittrick (together, MM). They attacked the hockey stick in talks, papers and by website. MM have often acted as visible faces, but information is quickly shared among key people. To some extent, MM seem to have taken over public roles earlier played by astrophysicists Sallie Baliunas and Willie Soon, long involved with GMI.

¹ Some thinktanks are effectively tax-free lobbying/PR organizations, of which many relevant ones are shown on an interactive map. maps.google.com/maps/ms?hl=en&ie=UTF8&msa=0&msid=107940825189517771981.0004815492d08b0c445f9&ll=38.882481,-76.978455&spn=0.771829,1.253815&z=10

By late 2003, TT had brought them to Washington and introduced them to climate anti-science advocates, including Sen. James Inhofe (R-OK). MM became GMI “experts.”

In February 2005, McIntyre started the Climate Audit website. Senator James Inhofe claimed at a GMI meeting that their work had discredited the hockey stick, one of the 4 key pillars of AGW. Much publicity followed, including an unusual front-page Wall Street Journal article.

In May 2005, MM visited Washington, gave a talk that outlined many of the ideas used later in the Wegman Report. Soon thereafter, Reps. Barton and Whitfield wrote to Mann, Bradley and Hughes with many demands.

Rep. Sherwood Boehlert (R-NY) pushed back against this odd, intimidating procedure, as did the science community. NAS offered a standard (expert, unbiased, independent) NRC panel to look at the problem.

Barton and Whitfield rejected that, but were then left with the problem of having their strategy rebuffed. Via an odd indirect route, they recruited statistician Edward Wegman, who recruited others, mostly his students. This was later presented as being like an NRC effort, but simply was not.

The Wegman Report (WR) was finally issued in July 2006, with Congressional hearings and much PR, but some problems were clear even at the time. Many more have been found since. In December 2009, blogger Deep Climate showed that WR §2 was mostly plagiarized, but with changes to weaken or even invert conclusions.

This report started to further explore WR scholarship, already shown as shoddy at best, but a different conclusion eventually emerged. *The WR was created to ratify and amplify MM+TT's latest PR to mislead Congress and the public. It had two clear missions: #1 discredit MBH99 via statistical arguments, and #2 discredit climate science by mis-applying social network analysis.*

Advice on reading this report

Contradictions are found among WR, related testimony and later efforts, not so obvious when just reading one part. The reader will find some redundancy of description as a result, as when repeating quotations for local reading flow. The complexity of the WR and surrounding events often defies easy simplification, as comprehensive backup evidence must be included. Common properties are given terse codings, and numerous cross-references included. I'd suggest ignoring all this on first read.

This report largely expands on parts of an earlier one:
 #[MAS2010] John R. Mashey, "Crescendo to Climategate Cacophony"
www.desmogblog.com/crescendo-climategate-cacophony
 V1.0 03/15/10.

Many of the people, organizations and activities mentioned briefly here are described in detail there.

Similar typographic conventions are used in the main body here - *Italics* for opinion and emboldening or underlining inside quotes mine. Layout tries to balance convenience between paper-only and on-line readers. The latter might print the main navigational aids (pp.2, 7, 8), then open a 2nd on-line copy of the PDF for jumps among Appendices. People who want to dig deep might also print p.12 as a reference sheet for the many codes.

Citations and references²

Citations found in the WR use its style, in which key MBH and MM papers have short codes, and all others use Author (year). All 80 WR references are listed in W.8.2, although some are vague or do not actually exist. W.8.8 and W.8.9 comment on ~50 of them, listed in the Index.

This report's own citations mostly use in-line URLs for on-line convenience. Some references are listed in this report's own Bibliography and cited in the form [MAS2010]. Wikipedia is helpful for quick topic introductions, but is never considered authoritative. For brevity, titles and given names are usually omitted, no discourtesy intended to any.

² As per Wikipedia, en.wikipedia.org/wiki/Citation, "More precisely, a citation is an abbreviated alphanumeric expression (e.g. [Newell84]) embedded in the body of an intellectual work that denotes an entry in the bibliographic references section of the work" In-line URLs combine citation+reference.

This report has 4 major parts:

Front matter – 12 pages

This includes the usual Table of Contents, Glossary and a brief Index placed near other navigational aids. It also includes some unfamiliar elements used to classify patterns and problems.

Memes are common climate anti-science messages, repeated so often that many are well-cataloged and numbered elsewhere. Here, a **Theme** is an important, generally accepted scientific idea or practice often ignored by the Wegman Report. The reader will often see text tagged with these, like Meme-18¹, or Theme-A⁴. Other codes include <eE> for Errors, <mM> for Meaning Changes, and <bB> for Biases, capitals rated more important.

Any of these are problems, but on first read, I would suggest ignoring all this, except to notice how pervasive they are. Some tables summarize these. The few readers who want to dig deeply can follow the codes..

Finally, the **Color codes** evolved late as a way to simplify categories of Memes&Themes, References, People and Organizations.

Likewise, I would suggest ignoring the colors, except to know

- **Red** usually means active climate anti-science, almost always a problem.
- **Orange** and **green** have various intermediate meanings.
- **Blue** usually means reasonable science or people (OK), often attacked, mis-used, or used as façade material (not OK). Theme⁴.is always bad.

Main discussion - §1 - §5 - about 25 pages.

People familiar with the hockey stick wars can skip §1. The rest summarizes the W.* sections, then puts all the pieces together.

A.* Appendices - about 70 pages.

This collects various topics as backup for the main discussion. Few people would read more than a few, but choices will differ. The Appendices effectively form a 200+-page reference manual, also covering topics related to the Wegman Report.

W.* Annotated Wegman, derivatives - about 135 pages.

Each W.n Appendix corresponds to WR§n, in some cases summarizing, in other cases annotating whole sections, as in the plagiarism studies.