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**Subject:** RE: response to Newsweek  
**Date:** Monday, May 31, 2010 11:09:09 PM

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ALL:

Let me just add that while the piece in Newsweek is extremely annoying, and my general view is that such attacks should not go unanswered, I suggest not spending a large amount of time on it, such as group letters often take. A primary reason for pushing back on this sort of thing is to chasten and educate the journalists and editors responsible. Few of the original readers see the rejoinder. But Newsweek is no longer what it once was, and may not be around for long. Detailed letters don't get printed anyway. There are lots of fires to put out, and this isn't necessarily the biggest. So it would be a better use of everyone's time if only one or two of this group, those who feel moved to do so, respond with a few sentences, individually.

Michael

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-----Original Message-----

From: Eric Steig [<mailto:steig@uw.edu>]

Sent: Monday, May 31, 2010 9:06 PM

To: Stephen H Schneider

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Subject: Re: response to Newsweek

Steve,

I wholeheartedly agree of course. My point is mostly that we shouldn't bother responding in detail to this particular attack on scientists' credibility -- short of perhaps pointing out it is old, tired, and unsubstantiated. Since the editorial says that we are 'defensive' it is particularly important not to come across as defensive in this case. What I don't think is working though is continuously insist that 'we have done nothing wrong' (even though it is mostly true).

Ok, enough from me. I'll be slicing up ice in the freezer at the National Ice Core Lab. (The Wall Street Journal had a 'nice' article today claiming that this work -- on the new 'WAIS Divide' ice core will solve the question of whether CO2 leads temperature or the reverse. Dick Lindzen and John Christy were the two 'experts' they interviewed. Hmm,.

Eric

Stephen H Schneider wrote:

> Though I agree with that Eric, and we must always point out the best science as you rightly say, there is much social science literature that shows this will not by itself do much at all in the "out there" political debate. "Truth" wins in the end, but sometimes takes a generation or two to percolate into

public consciousness and political action. I think it is a fact of life we had better not forget that political institutions and the mainstream media--broken institutions that they may be--are much more interested in "who can be trusted" than "what is the best science"--to be empirical, that framing of who to trust is ~80% of the questions I get from the media, congressional staff, etc, and I assure you it is hard work in these interviews for me to get them to re-frame their thinking to what is the science, and away from are the scientists trustworthy or any different in credibility from the "other side".

>

> Don't let us be naive about that--it is perception of the credibility of various claimants of "reality" that they focus on, not complex details dealing with the confidence we have in various scientific conclusions--our "day job" at NAS, IPCC etc. Of course we should explain the science right and insist they not neglect it, but if we ignore the credibility perception issue altogether we will continue to fail to get a fair hearing and be mis-framed by those with no hesitation to spin for special interests or deep ideology--and the media is very likely to continue to give them equal status at the table with us no matter how much we talk about peer reviewed science. Wish it weren't so, but in my too-long experience that is the bulk of it in the world of advocacy and spin out there, dislike it as many of us do, we have to know what is the process that frames the context of our work when it hits the public arena and make some adjustments in our accustomed style if we wish to have a  
> n impact. Lovely thing, this "real world"....but if we don't understand it it is hard to get effective attention in order to improve it.

>

> Cheers, Steve

>

>

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> ----- Original Message -----

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> Sent: Monday, May 31, 2010 2:44:22 PM  
> Subject: Re: response to Newsweek

>  
> All  
>  
> Let me just reiterate that in my view the most powerful response to

> Newsweek would be one that doesn't even address the attacks on the  
> integrity of scientists, but merely -- and forcefully-- points out how  
> wrong the article was about the scientific facts.

>  
> Eric

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>  
>  
>  
>

> Stephen H Schneider wrote:

>

>> Thanks Gabi, hi all. I agree that low climate sensitivity values hard  
>> to defend empirically and new work of my just-graduated PhD student,  
>> Carolyn Snyder, using her new compilation of spatially distributed  
>> time series of >500,000 years of "continuous" paleo data scaled to  
>> various forcings over time, finds just what Gabi said--very little  
>> likelihood of stretched left hand tail and smallish but still  
>> concerning possibility of fat right hand tail. A lot depends on how you  
>> define climate sensitivity--that is including as internal dynamics  
>> slow processes like ice sheet changes (moves CS distribution to bigger  
>> numbers typically to have so-called "full" climate sensitivity) or  
>> simply accounting for ice sheet changes as external radiative forcing  
>> varying over time. Can't say more until we get it through review at  
>> journals with embargoes--a behavior which I hate, but what can we do??  
>>

>> As to Newsweek, I already took Eric's suggestion to heart and emailed  
>> a reporter there I know well who amazingly enough is a specialist in  
>> environment and hasn't been sacked yet! I complained about falsely  
>> framed editorial about scientific credibility loss and asked if she  
>> could help us with an inside track to get a rebuttal. Will let you  
>> know when she responds. I won't paste in to this list what I said in  
>> private to the reporter, because I worry about our "private" emails  
>> being surreptitiously obtained and the usual forces of deception  
>> quoting bits out of context on their blog sites--a favorite past time  
>> for some of them. If anyone is interested email me privately.

>>

>> Cheers, Steve

>>

>> PS to Tom W.--I fully agree with your point about the 17% in the tails  
>> of the CS distribution, but isn't the number really a range: 5-17%,  
>> since "likely" in IPCC uncertainties guidance language last time had a  
>> table showing that the next category, "very likely" is >90%, so  
>> "likely" is 66-90% estimate--ergo the 5-17% range ("very unlikely" to  
>> "unlikely" are the agreed words for this range, not "cannot be  
>> excluded"). It is a trifle of language, primarily, but I wanted to  
>> clarify that there is consistent language for future use.

>>

>>

>> Stephen H. Schneider

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>>

>>  
>> ----- Original Message -----  
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>> I agree with Tom, it is very important to point out that the  
>> uncertainties are very different at the upper and lower tail. The  
>> lower tail is quite well constrained. There are a large number of  
>> studies, from modelling, and from observed evidence from deep time  
>> through LGM through last mill through the 20th century that show that  
>> a low (eg lower than 1.5) climate sensitivity is very difficult to  
>> reconcile with the data. Evidence from so many sources is stronger  
>> than individual lines. there have been occasional papers claiming  
>> lower sensitivities, but those made errors that were clear to spot,  
>> and in some cases for example, led to the (known) climate sensitivity  
>> of models to be crassly underestimated when applied to climate model  
>> data. Reto (cc'ed) and I summed up the evidence in a review paper in  
>> nature geoscience in fall 2008, which also discusses some recent low  
>> estimates (attached).  
>> The IPCC AR4 estimate nor that paper was estimate was trying to  
>> formally combine different lines of evidence into stronger overall  
>> evidence - if that were done, the constraints would be quite a bit  
>> stronger, but it is not straightforward to do and we worried about  
>> remaining errors being difficult to estimate. what this says is that  
>> the present estimate could be considered quite conservative.

>> Gabi

>> Quoting Tom Wigley <wigley@ucar.edu>:

>>> I agree.

>>> But let us not propagate the error in the Economist. Here is a para  
>>> from a report of mine. The reference cited is in Climatic Change if a  
>>> published source is required.

>>> -----

>>>  
>>> The uncertainty in the climate sensitivity has been specified in the  
>>> IPCC AR4. The best estimate value is  $\Delta T_{2x} = 3.0^{\circ}\text{C}$ , and the likely  
>>> (68% C.I.) range is 2.0 to 4.5°C. In other words, there is a 17%  
>>> chance that  $\Delta T_{2x}$  is less than 2.0°C, and a 17% chance that it is  
>>> greater than 4.5°C. The uncertainty distribution is therefore skewed  
>>> with a longer 'tail' at high values than at low values. If one  
>>> assumes this distribution is lognormal, then it is easy to calculate  
>>> the 90% C.I. (see Wigley et al., 2009) – which comes to 1.5 to  
>>> 6.0°C. There is, therefore, if one accepts the IPCC likely range, a  
>>> 5% chance that the sensitivity is more than 6.0°C (or less than  
>>> 1.5°C).

>>>  
>>> -----  
>>>  
>>> Tom.

>>>  
>>> ++++++

>>>  
>>> Eric Steig wrote:

>>>  
>>>  
>>>> Dear All,

>>>> I think that a group of scientists in the U.S. really needs to  
>>>> write a good response to the egregious editorial in Newsweek.

>>>> <http://www.newsweek.com/2010/05/28/uncertain-science.html>

>>>> Both individual letters or a letter signed by dozens of scientists  
>>>> might be considered. It would be especially good if this did not  
>>>> come from people associated with RealClimate, which is too often  
>>>> the only widely-known counterpoint to these sorts of things.

>>>> I would argue that the point of the letter would not be once again  
>>>> to defend scientists' integrity, important as that may be.

>>>> Rather, the letter should focus on the key scientific point, which  
>>>> is correcting what is said in the Newsweek article about climate  
>>>> sensitivity. In effect, Newsweek says that our knowledge of  
>>>> climate sensitivity is 'no longer certain' and that we can  
>>>> therefore not justify cutting fossil fuel use on this basis (!).

>>>> The point to make here -- at least in my view -- is that 1) the  
>>>> uncertainties were already clear in the IPCC report, and they have  
>>>> not changed and that 2) none of the recent political shenanigans  
>>>> have have changed our estimates of climate sensitivity.

>>>> You might borrow from the excellent article in the Economist, which  
>>>> sums up the point this way:

>>>> "...the sensitivity to a doubling of carbon dioxide of less than  
>>>> 1.5°C ... has perhaps one chance in ten of being correct. But if  
>>>> the IPCC were underestimating things by a factor of five or so,  
>>>> that would still leave only a 50:50 chance of ...a desirable  
>>>> outcome. The fact that the uncertainties allow you to construct a  
>>>> relatively benign future does not allow you to ignore futures in  
>>>> which climate change is large, and in some of which it is very  
>>>> dangerous indeed."

>>>>

>>>> I hope someone will take the lead on doing this. Newsweek is in  
>>>> demise, but it is still very widely read and influential.

>>>>

>>>> Best regards,

>>>>

>>>> Eric Steig

>>>>

>>>>

>> -- Gabriele Hegerl

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>> <http://www.geos.ed.ac.uk/people/person.html?indv=1613>

>>

>> -- The University of Edinburgh is a charitable body, registered in

>> Scotland, with registration number SC005336.

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**Subject:** Re: response to Newsweek  
**Date:** Monday, May 31, 2010 8:07:32 PM

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Steve,

I wholeheartedly agree of course. My point is mostly that we shouldn't bother responding in detail to this particular attack on scientists' credibility -- short of perhaps pointing out it is old, tired, and unsubstantiated. Since the editorial says that we are 'defensive' it is particularly important not to come across as defensive in this case. What I don't think is working though is continuously insist that 'we have done nothing wrong' (even though it is mostly true).

Ok, enough from me. I'll be slicing up ice in the freezer at the National Ice Core Lab. (The Wall Street Journal had a 'nice' article today claiming that this work -- on the new 'WAIS Divide' ice core will solve the question of whether CO2 leads temperature or the reverse. Dick Lindzen and John Christy were the two 'experts' they interviewed. Hmm,.

Eric

Stephen H Schneider wrote:

> Though I agree with that Eric, and we must always point out the best science as you rightly say, there is much social science literature that shows this will not by itself do much at all in the "out there" political debate. "Truth" wins in the end, but sometimes takes a generation or two to percolate into public consciousness and political action. I think it is a fact of life we had better not forget that political institutions and the mainstream media--broken institutions that they may be--are much more interested in "who can be trusted" than "what is the best science"--to be empirical, that framing of who to trust is ~80% of the questions I get from the media, congressional staff, etc, and I assure you it is hard work

in these interviews for me to get them to re-frame their thinking to what is the science, and away from are the scientists trustworthy or any different in credibility from the "other side".

>

> Don't let us be naive about that--it is perception of the credibility of various claimants of "reality" that they focus on, not complex details dealing with the confidence we have in various scientific conclusions--our "day job" at NAS, IPCC etc. Of course we should explain the science right and insist they not neglect it, but if we ignore the credibility perception issue altogether we will continue to fail to get a fair hearing and be mis-framed by those with no hesitation to spin for special interests or deep ideology--and the media is very likely to continue to give them equal status at the table with us no matter how much we talk about peer reviewed science. Wish it weren't so, but in my too-long experience that is the bulk of it in the world of advocacy and spin out there, dislike it as many of us do, we have to know what is the process that frames the context of our work when it hits the public arena and make some adjustments in our accustomed style if we wish to have a  
> n impact. Lovely thing, this "real world"....but if we don't understand it it is hard to get effective attention in order to improve it.

>

> Cheers, Steve

>

>

> Stephen H. Schneider  
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>  
> All  
>  
> Let me just reiterate that in my view the most powerful response to  
> Newsweek would be one that doesn't even address the attacks on the  
> integrity of scientists, but merely -- and forcefully-- points out how  
> wrong the article was about the scientific facts.  
>

> Eric

>  
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>  
>

> Stephen H Schneider wrote:

>

>> Thanks Gabi, hi all. I agree that low climate sensitivity values hard  
>> to defend empirically and new work of my just-graduated PhD student,  
>> Carolyn Snyder, using her new compilation of spatially distributed  
>> time series of >500,000 years of "continuous" paleo data scaled to  
>> various forcings over time, finds just what Gabi said--very little  
>> likelihood of stretched left hand tail and smallish but still  
>> concerning possibility of fat right hand tail. Alot depends on how you  
>> define climate sensitivity--that is including as internal dynamics  
>> slow processes like ice sheet changes (moves CS distribution to bigger  
>> numbers typically to have so-called "full" climate sensitivity) or  
>> simply accounting for ice sheet changes as external radiative forcing  
>> varying over time. Can't say more until we get it through review at  
>> journals with embargoes--a behavior which I hate, but what can we do??

>>

>> As to Newsweek, I already took Eric's suggestion to heart and emailed  
>> a reporter there I know well who amazingly enough is a specialist in  
>> environment and hasn't been sacked yet! I complained about falsely  
>> framed editorial about scientific credibility loss and asked if she  
>> could help us with an inside track to get a rebuttal. Will let you  
>> know when she responds. I won't paste in to this list what I said in  
>> private to the reporter, because I worry about our "private" emails  
>> being surreptitiously obtained and the usual forces of deception  
>> quoting bits out of context on their blog sites--a favorite past time  
>> for some of them. If anyone is interested email me privately.

>>

>> Cheers, Steve

>>

>> PS to Tom W.--I fully agree with your point about the 17% in the tails  
>> of the CS distribution, but isn't the number really a range: 5-17%,  
>> since "likely" in IPCC uncertainties guidance language last time had a  
>> table showing that the next category, "very likely" is >90%, so  
>> "likely" is 66-90% estimate--ergo the 5-17% range ("very unlikely" to  
>> "unlikely" are the agreed words for this range, not "cannot be  
>> excluded"). It is a trifle of language, primarily, but I wanted to  
>> clarify that there is consistent language for future use.

>>

>>

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>> < "Richard' 'Somerville" <rsomerville@ucsd.edu>,  
>> "Martin Heimann" <martin.heimann@bgc-jena.mpg.de>,  
>> "Don Kennedy" <kennedyd@stanford.edu>, "Heidi Cullen"  
>> , "Shari Bell"  
>> , "Rebecca Bratspies"  
>> <bratspies@mail.law.cuny.edu>, "Pete Myers"  
>> "Michael Oppenheimer" <omichael@princeton.edu>, "Naomi Oreskes"  
>> <naoreskes@ucsd.edu>, "Boslough" <mbeb@unm.edu>, "Ben"  
>> Santer" <santer1@llnl.gov>, "Stephen H Schneider" <shs@stanford.edu>  
>> Sent: Monday, May 31, 2010 1:51:29 PM  
>> Subject: Re: response to Newsweek

>>  
>> I agree with Tom, it is very important to point out that the  
>> uncertainties are very different at the upper and lower tail. The  
>> lower tail is quite well constrained. There are a large number of  
>> studies, from modelling, and from observed evidence from deep time  
>> through LGM through last mill through the 20th century that show that  
>> a low (eg lower than 1.5) climate sensitivity is very difficult to  
>> reconcile with the data. Evidence from so many sources is stronger  
>> than individual lines. there have been occasional papers claiming  
>> lower sensitivities, but those made errors that were clear to spot,  
>> and in some cases for example, led to the (known) climate sensitivity  
>> of models to be crassly underestimated when applied to climate model  
>> data. Reto (cc'ed) and I summed up the evidence in a review paper in  
>> nature geoscience in fall 2008, which also discusses some recent low  
>> estimates (attached).  
>> The IPCC AR4 estimate nor that paper was estimate was trying to  
>> formally combine different lines of evidence into stronger overall  
>> evidence - if that were done, the constraints would be quite a bit  
>> stronger, but it is not straightforward to do and we worried about  
>> remaining errors being difficult to estimate. what this says is that  
>> the present estimate could be considered quite conservative.

>>  
>> Gabi  
>>  
>> Quoting Tom Wigley <wigley@ucar.edu>:

>>  
>>  
>>  
>>> I agree.  
>>>  
>>> But let us not propagate the error in the Economist. Here is a para  
>>> from a report of mine. The reference cited is in Climatic Change if a  
>>> published source is required.  
>>>  
>>> -----  
>>>  
>>> The uncertainty in the climate sensitivity has been specified in the  
>>> IPCC AR4. The best estimate value is  $T_{2x} = 3.0\text{oC}$ , and the likely  
>>> (68% C.I.) range is 2.0 to 4.5oC. In other words, there is a 17%

>>> chance that  $\Delta T_{2x}$  is less than 2.0°C, and a 17% chance that it is  
>>> greater than 4.5°C. The uncertainty distribution is therefore skewed  
>>> with a longer 'tail' at high values than at low values. If one  
>>> assumes this distribution is lognormal, then it is easy to calculate  
>>> the 90% C.I. (see Wigley et al., 2009) – which comes to 1.5 to  
>>> 6.0°C. There is, therefore, if one accepts the IPCC likely range, a  
>>> 5% chance that the sensitivity is more than 6.0°C (or less than  
>>> 1.5°C).

>>>

>>> -----

>>>

>>> Tom.

>>>

>>> ++++++

>>>

>>> Eric Steig wrote:

>>>

>>>

>>>> Dear All,

>>>>

>>>> I think that a group of scientists in the U.S. really needs to  
>>>> write a good response to the egregious editorial in Newsweek.

>>>>

>>>> <http://www.newsweek.com/2010/05/28/uncertain-science.html>

>>>>

>>>> Both individual letters or a letter signed by dozens of scientists  
>>>> might be considered. It would be especially good if this did not  
>>>> come from people associated with RealClimate, which is too often  
>>>> the only widely-known counterpoint to these sorts of things.

>>>>

>>>> I would argue that the point of the letter would not be once again  
>>>> to defend scientists' integrity, important as that may be.

>>>>

>>>> Rather, the letter should focus on the key scientific point, which  
>>>> is correcting what is said in the Newsweek article about climate  
>>>> sensitivity. In effect, Newsweek says that our knowledge of  
>>>> climate sensitivity is 'no longer certain' and that we can  
>>>> therefore not justify cutting fossil fuel use on this basis (!).

>>>>

>>>> The point to make here -- at least in my view -- is that 1) the  
>>>> uncertainties were already clear in the IPCC report, and they have  
>>>> not changed and that 2) none of the recent political shenanigans  
>>>> have have changed our estimates of climate sensitivity.

>>>>

>>>> You might borrow from the excellent article in the Economist, which  
>>>> sums up the point this way:

>>>>

>>>> "...the sensitivity to a doubling of carbon dioxide of less than  
>>>> 1.5°C ... has perhaps one chance in ten of being correct. But if  
>>>> the IPCC were underestimating things by a factor of five or so,  
>>>> that would still leave only a 50:50 chance of ...a desirable  
>>>> outcome. The fact that the uncertainties allow you to construct a  
>>>> relatively benign future does not allow you to ignore futures in  
>>>> which climate change is large, and in some of which it is very  
>>>> dangerous indeed."

>>>>

>>>> I hope someone will take the lead on doing this. Newsweek is in  
>>>> demise, but it is still very widely read and influential.

>>>>

>>>> Best regards,

>>>>  
>>>> Eric Steig  
>>>>  
>>>>  
>> -- Gabriele Hegerl  
>> chair of climate system science  
>> School of GeoSciences  
>> University of Edinburgh  
>> <http://www.geos.ed.ac.uk/people/person.html?indv=1613>  
>>  
>> -- The University of Edinburgh is a charitable body, registered in  
>> Scotland, with registration number SC005336.  
>>  
>>  
>  
> -- ~~~~~  
> Eric J. Steig  
> Professor, Department of Earth and Space Sciences  
> Director, Quaternary Research Center  
> University of Washington, Seattle, WA 98195  
> tel: 206-685-3715  
> faculty.washington.edu/steig | depts.washington.edu/isolab  
>  
  
--  
~~~~~  
Eric J. Steig  
Professor, Department of Earth and Space Sciences  
Director, Quaternary Research Center  
University of Washington, Seattle, WA 98195  
tel: 206-685-3715  
faculty.washington.edu/steig | depts.washington.edu/isolab

**From:** [Sean Davis](#)  
**To:** [Andrew Dessler](#)  
**Subject:** A few papers of interest  
**Date:** Tuesday, May 11, 2010 7:27:09 PM  
**Attachments:** [Spencer magnitude revised.pdf](#)  
[2010GL042911-1.pdf](#)

---

Andy,

I'm just starting to look at the reviewers comments, and will plan on talking to you next week about where to go with the paper. I know you've thought a lot more about the issue of these regressions of  $q$  vs.  $T$  than I have, but depending on what we decide to do, we may want to cite these recent papers by Dan Murphy and Piers Forster -- they were essentially responses to the Spencer and Braswell and the Lindzen and Choi papers.

Basically, they both support the view that the types of regressions we've done are valid, but I need to try and understand the details a bit more to see if they are really relevant for our paper. On first look, I think the Murphy and Forster paper is more relevant than the Murphy one, but they both might be relevant.

Talk to you next week.

Sean

----- Original Message -----

**Subject:**file

**Date:**Tue, 11 May 2010 16:37:39 -0600

**From:**Daniel.M.Murphy <[Daniel.M.Murphy@noaa.gov](mailto:Daniel.M.Murphy@noaa.gov)>

**To:**[Sean.M.Davis@noaa.gov](mailto:Sean.M.Davis@noaa.gov)

**From:** [Gerald North](#)  
**To:** [Andrew Dessler](#)  
**Subject:** Fwd: Latest from Curry  
**Date:** Sunday, April 25, 2010 12:41:30 PM

---

Yeah, I sent this below (before your message). And, of course, he answered it, but I am done.

Something about this reminds me of a divorce I had once.

Jerry

Begin forwarded message:

**From:** Gerald North <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
**Date:** April 25, 2010 11:16:08 AM CDT  
**To:** "Robert Bradley" <  
**Subject:** **Re: Latest from Curry**

Dear Rob,

Until recently, our relationship has been pedagogical. You asked me questions over the years and I tried to answer them as best I could. I have enjoyed that because it caused me to learn as I taught.

We are no longer in that mode. You are using me to advance a political agenda. I have asked you not to post these private communications, but you persist.

This has come to an end. I am sorry, but it must be.

Gerald North

On Apr 25, 2010, at 11:10 AM, Robert Bradley wrote:

Dear Jerry:

I have made the decision to post our controversy so you and Andy will every reason to explain yourselves in this very public, contentious public policy debate.

<http://www.masterresource.org/2010/04/gerald-north-the-non-alarmist-alarmist/>

And remember:

- 1) both of you are public servants of the State of Texas as full time paid employees of a state university, and
- 2) you are on record as challenging the State of Texas on the state's petition against EPA's endangerment finding. I

believe this post (and the other related ones at MasterResource) are relevant in this regard.

I am afraid you are 'in denial' under the perverse incentive (grant \$\$\$), group think ('tribalism' as Judith Curry would put it), and mind set (Malthusianism) of most of your profession.

I thought that if you would take a month or two to step back and really think about what you believe, there was a chance you would 'own up' to your private beliefs and how they diverge from the IPCC--just like how your beliefs have diverged from the mini-alarms that big names in your profession have championed (your *Chronicle* letter-to-the-editor was quite important and even courageous, in retrospect). Judging from the last emails from you to me, I was wrong.

I was also naive to think you would take a closer look at Climategate a la Judith Curry. "These are all her opinions and she has a right to hold and exhibit them" is a cop out when you as a 'middle of the roader' really have an obligation to speak truth to power. She has courage and you do not. She and all of us deserve better from you. This cop-out is what you have told me about James Hansen as a duck (I can pull out those emails if you would like). Is Al Gore or John Holdren excused in this way too? Can anyone hold any belief as if there was not a 'balance of evidence' in the whole climate debate?

Shoot back. If I am wrong, I am wrong. But I think there needs to be a lot of explaining on what the heck you believe on models, sensitivity, fudge factors, and the rest of it given your (private) history.

The ball is in your court. And there is also time to come clean with your beliefs and not hide behind the IPCC, Dr. Dessler, or anyone else. You are your own man and not like a young scientist who cannot professionally or financially afford to buck the establishment on the quite unsettled science of climate change and politically-forced scientific 'consensus'.

- Rob

---

**From:** Gerald North [<mailto:>]  
North  
**Sent:** Sunday, April 25, 2010 10:26 AM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf Of** Gerald

2.00 is the value for no cloud feedback. I do not know what cloud feedback is. No one else knows either. But the best tool we have to estimate this is the GCM. They are unanimous. There is the possibility of using earth radiation budget data (a la Lindzen, Murphy et al., and others who all draw different conclusions from each other), but I think it is much less certain than the GCM, because of the short record and many other pitfalls. People should keep looking at this but understand the risk. I suspect that my estimates with Wu are actually better than these at the moment.

I guess I am confused about "litmus test".  
Jerry

On Apr 25, 2010, at 10:07 AM, Robert Bradley wrote:

Jerry: you have been at 2C for as long as I have known you, up until the lunch in January where you said you were 2C with a +/- .25C.

Why have that litmus test?

---

**From:** Gerald North [<mailto:>]  
**Of:** Gerald North  
**Sent:** Sunday, April 25, 2010 9:48 AM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf**

Once again, you seem to think my old (1998) favorite value for doubling CO<sub>2</sub> is 2.00 deg C is my last word on the subject and that I am afraid to say so publicly. It does seem to be the value one would obtain if there were no cloud feedbacks. I am attaching two papers written by Qigang Wu and myself. Qigang was one of my best PhD students (PhD in 2000).

The first, published in 2003 says:

"The data are consistent with models whose sensitivity to CO<sub>2</sub> doubling is around 2.7C. The 95% confidence interval for this estimate is (2.3C, 3.1C)".

**From:** on behalf of [Andrew Dessler](#)  
**To:** [Gerald North](#)  
**Subject:** Re: my latest to Bradley  
**Date:** Sunday, April 25, 2010 12:10:13 PM

---

@#\$%^&^%\$!!!! stop e-mailing this guy. don't read his e-mails.  
forget about him. you will not win. you will not tie. you will  
lose.

On Sun, Apr 25, 2010 at 9:50 AM, Gerald North <g-north@tamu.edu> wrote:

> Is this habit forming?  
> Jerry  
>  
> Begin forwarded message:  
>  
> From: Gerald North <g-north@tamu.edu>  
> Date: April 25, 2010 9:47:31 AM CDT  
> To: "Robert Bradley" <  
> Subject: Re: Latest from Curry  
> Once again, you seem to think my old (1998) favorite value for doubling CO2  
> is 2.00 deg C is my last word on the subject and that I am afraid to say so  
> publicly. It does seem to be the value one would obtain if there were no  
> cloud feedbacks. I am attaching two papers written by Qigang Wu and myself.  
> Qigang was one of my best PhD students (PhD in 2000).  
>  
> The first, published in 2003 says:  
> "The data are consistent with models whose sensitivity to CO2 doubling  
> is around 2.7C. The 95% confidence interval for this  
> estimate is (2.3C, 3.1C)".  
>  
> The second paper with Qigang Wu was published in 2008 states:  
> "The observed seasonal cycle is consistent  
> with models whose sensitivity to CO2 doubling is around  
> 3.1C. The 95% confidence interval for this estimate is  
> (1.8C, 4.3C)".  
>  
> These results are entirely consistent with the IPCC average and range.  
> Neither study is wholly convincing, but either is perhaps more convincing  
> than the EBM result of yesteryear. But the studies attempt to compare GCMs  
> with one another using heretofore (obscure but) little-used statistics which  
> can be compared to the actual data generated by the models and this in turn  
> compared to the observations. This has been a theme of my work especially  
> with Qigang Wu.  
> You seem to be trying to pit me against the mainstream of climate  
> researchers and these two studies show that there are many consistency  
> checks that place me right among them. Yes, I am a middle of the road guy.  
> So are they.  
> I ask that you not post any of my private emails to you on your blog. Too  
> much is taken out of context.  
> Jerry  
>  
>  
>  
>  
> On Apr 25, 2010, at 7:53 AM, Robert Bradley wrote:  
>  
>

- > We are talking past each other. You are not comfortable dealing with
- > Climategate and continue to insist that you and the IPCC are in lockstep
- > despite your 1/3 lower sensitivity estimate--an estimate that puts the A&M
- > litmus test in trouble.
- >
- > I am going to go ahead and post next week at MasterResource on all this and
- > hope that you--or Dessler--respond in whatever way you want. Have Dessler do
- > it--he is a blogger unlike you and has very strong opinions.
- >
- > - Rob

---

> From: Gerald North [<mailto:>] On Behalf Of Gerald North  
> Sent: Saturday, April 24, 2010 9:55 PM  
> To: Robert Bradley  
> Subject: Re: Latest from Curry

- >
- > These are all her opinions and she has a right to hold and exhibit them. But
- > what are her positions on the science: sensitivity, anthropogenic component,
- > greenhouse effect, feedbacks. I think they are mainstream like mine and I
- > think she is irritated by the distraction, some of cause of which does fall
- > upon the scientists for their poor handling of the whole affair. She is
- > working hard to restore confidence in the science.
- > But what does she think the science says?
- > Jerry
- > On Apr 24, 2010, at 8:18 PM, Robert Bradley wrote:

> <http://www.collide-a-scape.com/2010/04/23/an-inconvenient-provocateur/>

> Among many other things she says:

- >
- > Sloppy record keeping, cherry picking of data, and inadequate statistical
- > methods do not constitute scientific misconduct, but neither do they inspire
- > confidence in the research product. Further, the "bad apple" issue is still
- > out there, but this is something that is impossible to assess objectively.
- > And the behavior of these scientists (sloppy record keeping, dismissal of
- > skeptical critiques, and lack of transparency) has slowed down scientific
- > progress in assessing and improving these very important data sets.
- > Therefore I have been proposing that we move away from the focus on
- > individual behavior, and shifting focus to issues related to the IPCC
- > assessment process, addressing issues related the availability of data and
- > transparency of the methods, and to improving the temperature data and
- > proxies. Once these issues are addressed, the "bad apple" issue becomes
- > mostly moot.

> IPCC Process:

- >
- > Corruptions to the IPCC process that I have seen discussed include:
- > • lead/contributing authors assessing their own work – (e.g. von Storch
- > criticism in 2005), in some cases resulting in an overemphasis on their own
- > papers written by themselves and their collaborators;
- > • tailoring graphics and not adequately describing uncertainties
- > ostensibly to simplify and not to "dilute the message" that IPCC wanted to
- > send;
- > • violations of publication (in press) deadlines for inclusions of papers
- > in the IPCC report;
- > • inadequacies in the review process whereby lead/contributing authors
- > don't respond fairly to adverse criticism; this inadequacy arises in part to

- > the authors themselves having ultimate authority and in part to cursory
- > performance by the Review Editors;
- > • evasiveness and unresponsiveness by the IPCC regarding efforts to
- > investigate alleged violations occurring in the review process;
- > • IPCC Review Editors and authors using the IPCC to avoid accountability
- > under national FOI legislation.
- >
- > Pretty serious stuff if you have time to focus on it....
- >
- > - Rob
- >
- >
- >
- > Robert L. Bradley Jr.
- > CEO & Founder, Institute for Energy Research
- > 6219 Olympia Drive
- > Houston, Texas 77057-3527
- > Phone: 713-974-1918
- > Fax: 713-974-1993
- >
- > IER Website: [www.energyrealism.org](http://www.energyrealism.org)
- > Political Capitalism website: [www.politicalcapitalism.org](http://www.politicalcapitalism.org)
- > Energy Blog: [www.MasterResource.org](http://www.MasterResource.org)
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Andrew Dessler  
Professor of Atmospheric Sciences  
Texas A&M University  
<http://atmo.tamu.edu/profile/ADessler>

**From:** [Robert Bradley](#)  
**To:** ["Gerald North"](#)  
**Cc:** ["Andrew Dessler"](#)  
**Subject:** RE: Latest from Curry  
**Date:** Sunday, April 25, 2010 11:34:43 AM

---

Climate science is 'nonpolitical'? What world do you live in?

Would you like me to pull out the emails with your political statements in them? Was your *Chronicle* op-ed with Dessler nonpolitical?

Yes, I knew this could be the end. But this is a small price to pay to try to get toward the truth as you experts state it.

And if you would 'come clean' with a full response, you might actually thank me for all this on down the road. I have emails from you thanking me for my 'public policy' push on the science--want me to pull those out too?

You have stated that you do not write emails that you do not want to be public. What are you hiding other than what you have said in the past?

Is the 'private' Jerry North just an extension of Climategate--emails that reveal what is really going on behind the curtain? What if we could see all of the emails of the climate alarmists and the closet non-alarmists? Wow!

*What do you really believe, Jerry, to inform the policy debate?* Sounds like you will just ignore this and hope it goes away..... That is a pretty bad way to deal with it--and I gave you a golden opportunity to come clean in a much better manner than what is now the case. You are a student of the philosophy and history of science. I have to believe you care about how a philosopher or historian of science will view your legacy.

Why not explain yourself? It is not the end of the world to own up to 2C, for gosh sakes..... And the problems of models..... And the obvious lessons of Climategate.... This is not ultra-skepticism but good middle-of-the-road stuff.

- Rob

---

**From:** Gerald North [mailto:[mailto:gerald.north@noaa.gov](#)]  
**Sent:** Sunday, April 25, 2010 11:16 AM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf Of** Gerald North

Dear Rob,

Until recently, our relationship has been pedagogical. You asked me questions over the years and I tried to answer them as best I could. I have enjoyed that because it caused me to learn as I taught.

We are no longer in that mode. You are using me to advance a political agenda. I have asked you not to post these private communications, but you persist.

This has come to an end. I am sorry, but it must be.

Gerald North

On Apr 25, 2010, at 11:10 AM, Robert Bradley wrote:

Dear Jerry:

I have made the decision to post our controversy so you and Andy will every reason to explain yourselves in this very public, contentious public policy debate.

<http://www.masterresource.org/2010/04/gerald-north-the-non-alarmist-alarmist/>

And remember:

1) both of you are public servants of the State of Texas as full time paid employees of a state university, and

2) you are on record as challenging the State of Texas on the state's petition against EPA's endangerment finding. I believe this post (and the other related ones at MasterResource) are relevant in this regard.

I am afraid you are 'in denial' under the perverse incentive (grant \$\$\$), group think ('tribalism' as Judith Curry would put it), and mind set (Malthusianism) of most of your profession.

I thought that if you would take a month or two to step back and really think about what you believe, there was a chance you would 'own up' to your private beliefs and how they diverge from the IPCC--just like how your beliefs have diverged from the mini-alarms that big names in your profession have championed (your *Chronicle* letter-to-the-editor was quite important and even courageous, in retrospect). Judging from the last emails from you to me, I was wrong.

I was also naive to think you would take a closer look at Climategate a la Judith Curry. "These are all her opinions and she has a right to hold and exhibit them" is a cop out when you as a 'middle of the roader' really have an obligation to speak truth to power. She has courage and you do not. She and all of us deserve better from you. This cop-out is what you have told me about James Hansen as a duck (I can pull out those emails if you would like). Is Al Gore or John Holdren excused in this way too? Can anyone hold any belief as if there was not a 'balance of evidence' in the whole climate debate?

Shoot back. If I am wrong, I am wrong. But I think there needs to be a lot of explaining on what the heck you believe on models, sensitivity, fudge factors, and the rest of it given your (private) history.

The ball is in your court. And there is also time to come clean with your beliefs and not hide behind the IPCC, Dr. Dessler, or anyone else. You are your own man and not like a young scientist who cannot professionally or financially afford to buck the establishment on the quite unsettled science of climate change and politically-forced scientific 'consensus'.

- Rob

---

**From:** Gerald North [<mailto:>]  
**Sent:** Sunday, April 25, 2010 10:26 AM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf Of** Gerald North

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North  
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The first, published in 2003 says:

"The data are consistent with models whose sensitivity to CO<sub>2</sub> doubling is around 2.7C. The 95% confidence interval for this estimate is (2.3C, 3.1C)".

**From:** [Robert Bradley](#)  
**To:** ["Gerald North"](#)  
**Cc:** ["Andrew Dessler"](#)  
**Subject:** RE: Latest from Curry  
**Date:** Sunday, April 25, 2010 11:10:51 AM

---

Dear Jerry:

I have made the decision to post our controversy so you and Andy will every reason to explain yourselves in this very public, contentious public policy debate.  
<http://www.masterresource.org/2010/04/gerald-north-the-non-alarmist-alarmist/>

And remember:

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---

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**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf Of** Gerald North

2.00 is the value for no cloud feedback. I do not know what cloud feedback is. No one else knows either. But the best tool we have to estimate this is the GCM. They are unanimous. There is the possibility of using earth radiation budget data (a la Lindzen, Murphy et al., and others who all draw different conclusions from each other), but I think it is much less certain than the GCM, because of the short record and many other pitfalls. People should keep looking at this but understand the risk. I suspect that my estimates with Wu are actually better than these at the moment.

I guess I am confused about "litmus test".  
Jerry

On Apr 25, 2010, at 10:07 AM, Robert Bradley wrote:

Jerry: you have been at 2C for as long as I have known you, up until the lunch in January where you said you were 2C with a +/- .25C.

Why have that litmus test?

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**From:** Gerald North [mailto:  
**Sent:** Sunday, April 25, 2010 9:48 AM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf Of** Gerald North

Once again, you seem to think my old (1998) favorite value for doubling CO<sub>2</sub> is 2.00 deg C is my last word on the subject and that I am afraid to say so publicly. It does seem to be the value one would obtain if there were no cloud feedbacks. I am attaching two papers written by Qigang Wu and myself. Qigang was one of my best PhD students (PhD in 2000).

The first, published in 2003 says:

"The data are consistent with models whose sensitivity to CO<sub>2</sub> doubling is around 2.7C. The 95% confidence interval for this

estimate is (2.3C, 3.1C)".

**From:** [Gerald North](#)  
**To:** [Andrew Dessler](#)  
**Subject:** my latest to Bradley  
**Date:** Sunday, April 25, 2010 9:50:45 AM  
**Attachments:** [\(121\)Wu&North03.pdf](#)  
[Untitled attachment 66958.htm](#)  
[\(135\)Wu.karoly.North.GRL.08.pdf](#)  
[Untitled attachment 66961.htm](#)

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Is this habit forming?  
Jerry

Begin forwarded message:

**From:** Gerald North <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
**Date:** April 25, 2010 9:47:31 AM CDT  
**To:** "Robert Bradley" <  
**Subject:** Re: Latest from Curry

Once again, you seem to think my old (1998) favorite value for doubling CO<sub>2</sub> is 2.00 deg C is my last word on the subject and that I am afraid to say so publicly. It does seem to be the value one would obtain if there were no cloud feedbacks. I am attaching two papers written by Qigang Wu and myself. Qigang was one of my best PhD students (PhD in 2000).

The first, published in 2003 says:

"The data are consistent with models whose sensitivity to CO<sub>2</sub> doubling is around 2.7C. The 95% confidence interval for this estimate is (2.3C, 3.1C)".

The second paper with Qigang Wu was published in 2008 states:

"The observed seasonal cycle is consistent with models whose sensitivity to CO<sub>2</sub> doubling is around 3.1C. The 95% confidence interval for this estimate is (1.8C, 4.3C)".

These results are entirely consistent with the IPCC average and range. Neither study is wholly convincing, but either is perhaps more convincing than the EBM result of yesteryear. But the studies attempt to compare GCMs with one another using heretofore (obscure but) little-used statistics which can be compared to the actual data generated by the models and this in turn compared to the observations. This has been a theme of my work especially with Qigang Wu.

You seem to be trying to pit me against the mainstream of climate researchers and these two studies show that there are many consistency checks that place me right among them. Yes, I am a middle of the road guy. So are they.

I ask that you not post any of my private emails to you on your blog. Too much is taken out of context.

Jerry

On Apr 25, 2010, at 7:53 AM, Robert Bradley wrote:

We are talking past each other. You are not comfortable dealing with Climategate and continue to insist that you and the IPCC are in lockstep despite your 1/3 lower sensitivity estimate--an estimate that puts the A&M litmus test in trouble.

I am going to go ahead and post next week at MasterResource on all this and hope that you--or Dessler--respond in whatever way you want. Have Dessler do it--he is a blogger unlike you and has very strong opinions.

- Rob

---

**From:** Gerald North [<mailto:>]  
**Sent:** Saturday, April 24, 2010 9:55 PM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf Of** Gerald North

These are all her opinions and she has a right to hold and exhibit them. But what are her positions on the science: sensitivity, anthropogenic component, greenhouse effect, feedbacks. I think they are mainstream like mine and I think she is irritated by the distraction, some of cause of which does fall upon the scientists for their poor handling of the whole affair. She is working hard to restore confidence in the science.

But what does she think the science says?

Jerry

On Apr 24, 2010, at 8:18 PM, Robert Bradley wrote:

<http://www.collide-a-scape.com/2010/04/23/an-inconvenient-provocateur/>

Among many other things she says:

Sloppy record keeping, cherry picking of data, and inadequate statistical methods do not constitute scientific misconduct, but neither do they inspire confidence in the research product. Further, the “bad apple” issue is still out there, but this is something that is impossible to assess objectively. And the behavior of these scientists (sloppy record keeping, dismissal of skeptical critiques, and lack of transparency) has slowed down scientific progress in assessing and improving these very important data sets. Therefore I have been proposing that we move away from the focus on individual behavior, and shifting focus to issues related to the IPCC assessment process, addressing issues related the availability of data and transparency of the methods, and to improving the temperature data and proxies. Once these issues are addressed, the “bad apple” issue becomes mostly moot.

IPCC Process:

Corruptions to the IPCC process that I have seen discussed include:

- lead/contributing authors assessing their own work – (e.g. [von Storch criticism](#) in 2005), in some cases resulting in an overemphasis on their own papers written by themselves and their collaborators;
- tailoring graphics and not adequately describing uncertainties ostensibly to simplify and not to “dilute the message” that IPCC wanted to send;
- violations of publication (in press) deadlines for inclusions of papers in the IPCC report;
- inadequacies in the review process whereby lead/contributing authors don’t respond fairly to adverse criticism; this inadequacy arises in part to the authors themselves having ultimate authority and in part to cursory performance by the Review Editors;
- evasiveness and unresponsiveness by the IPCC regarding efforts to investigate alleged violations occurring in the review process;
- IPCC Review Editors and authors using the IPCC to avoid accountability under national FOI legislation.

Pretty serious stuff if you have time to focus on it....

- Rob

Robert L. Bradley Jr.  
CEO & Founder, Institute for Energy Research  
6219 Olympia Drive  
Houston, Texas 77057-3527  
Phone: 713-974-1918  
Fax: 713-974-1993

IER Website: [www.energyrealism.org](http://www.energyrealism.org)  
Political Capitalism website: [www.politicalcapitalism.org](http://www.politicalcapitalism.org)  
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**Sent:** Saturday, April 24, 2010 9:55 PM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

**On Behalf Of** Gerald North

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**From:** [Robert Bradley](#)  
**To:** ["Gerald North"](#)  
**Cc:** ["Andrew Dessler"](#)  
**Subject:** RE: Latest from Curry  
**Date:** Sunday, April 25, 2010 7:54:04 AM

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- Rob

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**From:** Gerald North [mailto:[mailto:gerald.north@masterresource.com](#)] **On Behalf Of** Gerald North  
**Sent:** Saturday, April 24, 2010 9:55 PM  
**To:** Robert Bradley  
**Subject:** Re: Latest from Curry

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**From:** [Robert Bradley](#)  
**To:** ["Gerald North"](#)  
**Cc:** ["Eric Berger"](#); ["William Dawson"](#); ["Andrew Dessler"](#); ["Curry, Judith A"](#); [Richard Lindzen](#); ["Chip Knappenberger"](#)  
**Subject:** RE: Climate Model Post  
**Date:** Tuesday, April 20, 2010 11:01:10 AM

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Dear Jerry:

I asked for substantive feedback from you to my post(s) and instead got a sarcastic, emotional response. You are clearly annoyed, but open debate about contentious public public policy issues should not be compromised by personal relationships or 'favors'. And there is nothing wrong about a 'challenge culture' and mid-course corrections, either. We are talking about climate science, after all.

I am going to elaborate as best I can and bring in some more of your own quotations for the record.

Jerry: [you are a very interesting and important figure in the climate-change debate--and one whose views future historians of science should note.](#) Back in 1998, I picked you out of many candidates as a corporate consultant because you seemed to be more open to finding the middle than many of your colleagues. Thinking that Enron was progressive on the climate issue (and they unfortunately were--Ken Lay saw many rent-seeking opportunities with CO2 pricing), you said yes.

"In talking over consulting with ENRON with many friends, I decided to do it, only because of the open-minded position ENRON seems to be taking. I decided that I might even have an influence on what course ENRON eventually takes. I am not concerned with one ideological position or another—just the truth. If ENRON makes use of the truth to make a profit, good show. If ENRON wants to twist the truth to the detriment of everyone else, I will drop out—tarnished but wiser."

- Gerald North (Texas A&M) to Rob Bradley (Enron), March 25, 1998

I think you provide an excellent 'case study' to understand 1) how the climate alarm got out of control, and 2) how/why a good many in your profession got off scientific track (as evidenced by Climategate and the growing recognition of problems with the IPCC reports).

### **My Major Point: You Have 'Gone Political' and 'Gone Left' Post-Climategate Despite Your Skepticism About Climate Alarmism--and Climategate Itself**

I have a treasure trove of emails from you that are fair and insightful, in retrospect. (And you have stated that you write your emails as if they would be made public--nothing to fear from your own views.) Some of them are very critical of scientists--skeptics and alarmists. Your criticisms of the skeptics are public (I can provide citations); your more 'private' views against alarmism should be made public too.

This is why, coming out of our decade-long experience, I was so disappointed that you rented your good name to Dessler's attack on the State of Texas regarding its

petition against EPA's endangerment finding.

What happened to the Gerald North of old?

"I did worry that my comment on my not being willing to sign on to Kyoto right now got into the [*Houston*] *Chronicle* and in our local paper. I do not like being too public on policy matters. It ain't my thing."

- Gerald North (Texas A&M) to Rob Bradley (Enron), October 2, 1998

And your rejection of knee-jerk alarmism:

"As you know I am a subscriber [to man-made warming], but hardly in the Al Gore category. Nor do I have any preconceived ideas about what should be done about GW if anything. I have been busy fending off reporters trying to connect the unusual [El Nino-driven] summer [heat spike] to GW. I even sent an e-mail to Gore."

- Gerald North (Texas A&M) to Richard Lindzen with cc Rob Bradley (Enron), August 11, 1998

Which also included an open mind toward low-sensitivity warming and the quite possible net positive externalities of GHG emissions, particularly CO2.

"[Robert] Mendelsohn's position is rather similar to yours.... He believes the impacts are not negative at all for the US and most of the developed countries. Most impact studies seem to be showing this. It leads us to think that a little warming is not so bad. Glad I have kept my mouth shut on this issue of which I know so little."

- Gerald North (Texas A&M) to Rob Bradley (Enron), November 12, 1999

And given your views, why did you not jump on Climategate in the way that Judith Curry did? You went public (*Washington Post*, etc.) that Climategate was no big deal and then said you had not read the emails! Have you read *Climategate: The Crutape Letters*? Why would you *not* read it with great interest? Where there are plumes of smoke, there *is* fire.

Some years back, I challenged you on the obvious scientific errors of Al Gore's book/movie, *An Inconvenient Truth*--including his show-stopper ice age graph on CO2 levels vs. temperature, the very one you had me take out of Enron's stock presentation:

"I do not remember, but I think Gore has used the famous ice age graph correlating CO2 and climate change. I think I had you take it out of your [Enron] presentation if you recall. [Pat] Michaels is right about its irrelevance, but it is really not new to the research community as I stated."

- Gerald North (Texas A&M) to Rob Bradley (Enron), May 5, 1999

But you simply claimed that you had not and did not want to watch the movie (the 'I-know-nothing' Sgt. Schultz defense that Enron execs used). Yes, you finally reviewed

the book beyond its political moment and in a rather apologetic way. But what if you had greeted the book and movie with some tough, sober scientific assessment? You could have really done some good for maintaining scientific standards in the heat of political battle.

And then your tepid Climategate response.

AND then the *Chronicle* op-ed, which I criticized as scientific 'spin':  
<http://www.masterresource.org/2010/03/reconsidering-the-desslernorth-op-ed/>

So much for trying to find the middle of the debate, a middle that your own views champion.

So now let me respond to your email reply in its entirety:

### **1. Comfort against Climate Alarmism**

"I really enjoyed the 'fact' that I saved you from being a 'climate alarmist'."

In fact, your middle-of-the-road stance has been quite comforting to me. I have greater confidence that climate alarmism is very exaggerated. Your warming range is outside of the official IPCC range on the low side--the world should know that even though you have kept this unadvertised. And you alerted me to some bad scientific actors that were pushing the alarm--more comfort amid all of the uncertainty.

Third, your recognition of the exaggerated climate mini-alarms (super storms, disruption of thermohaline circulation, etc.) in personal emails and in a letter-to-the-editor in the *Houston Chronicle* has been comforting too. The 1998 temperature spike and, more recently, the very bad Gulf Coast hurricanes--why wouldn't I think the something bad from the human influence might be probable?

And so the balance of scientific evidence is against anthropogenic global warming being the mother of all negative externalities. You helped me realize this (wish Enron could have toned down the climate alarmism ... I certainly failed on that one).

Here is some of what you told me:

"[A review of the models] (together with my own toy model prejudice) has led me to think that sensitivity [of climate to greenhouse gas forcing] is collectively 'coming down.'"

- Gerald North (Texas A&M) to Rob Bradley (Enron), February 1, 1998

"My own conclusion is that we can see the [greenhouse and aerosol] signals (G and V) but they might be weaker than we originally thought."

- Gerald North (Texas A&M) to Rob Bradley (Enron), May 7, 1999

"As I have argued for years, we simply do not know the answer. There is a wide margin of error in many of the ingredients that go into the models. For

example, we do not know some of the radiative properties of the aerosols to a factor of 5. No matter how good your climate model is, you cannot compensate for that uncertainty. The range of uncertainty is broad enough to accommodate [Pat] Michaels (well, maybe North) and Mahlman.”

- Gerald North (Texas A&M) to Rob Bradley (Enron), September 17, 1999

“I am buying the Lindzen story as far as the importance of upper level water vapor.... I am beginning to sense a sea change.”

- Gerald North (Texas A&M) to Rob Bradley (Enron), November 12, 1999

“[Richard] Kerr’s article delved a bit beneath the surface to find who some of the silent skeptics (really noncommittals) are. I suspect there are many more.”

- Gerald North (Texas A&M) to Rob Bradley (Enron), September 17, 1999

“As usual we may have been caught believing our models before we should.”

- Gerald North (Texas A&M) to Rob Bradley (Enron), June 17, 1998

“I think Dick [Lindzen] and I agree on the role of lag in the oceans and the freedom modelers have in using the oceans to help in the fit to the record.”

- Gerald North (Texas A&M) to Rob Bradley (Enron), August 18, 1998

And on extreme events, your message to me back to Enron is unchanged--more comfort.

“In his article Sunday, Rob Bradley reminds us of the errors made about dire climate predictions proffered by some climate science outliers. These have been given undue coverage by politicians and the media (the same can be said about the nay-saying fringe). Virtually all of these dire predictions were never made or endorsed by the mainstream climate community of researchers in the field.

- Gerald North, “Fringe Predictions,” Letter to the Editor, *Houston Chronicle*, April 1, 2008.

Square this with (Dessler's) recent op-ed co-signed by you that said in part:

“Rising sea levels threaten our coasts; increasing weather variability, including heat waves, droughts, heavy rainfall events and even winter storms, affect our infrastructure, energy and even our health.”

(<http://www.chron.com/disp/story.mpl/editorial/outlook/6900556.html>)

Settled science ... really? Human driven and bad. All bad? Nothing benign or good? Will the real Jerry North please stand up?

## 2. Andy Dessler

"Frankly, your descriptions of my colleague Andrew Dessler are outrageous. You seem to forget that he spent several hours tutoring you and your student from [Kinkaid] on climate change during a university holiday."

First of all, I am all for Dr. Dessler the scientist refuting or correcting any climate 'skeptic' or anyone else on science. But I would expect that he (as you) would call out bad science by the Al Gores of the world and the 'dire climate predictions' that you mention above. Has he? No, he teams up with the infamous Joe Romm for science presentations for the media and offers no criticism of the alarmists--and Romm's serial exaggerations. I can't help but think that Dessler's political views drive his science rather than the other way around.

At our lunch, I found it a bit 'outrageous' that Dessler said:

- 1) humankind could be living underground in the future because of the human influence on climate and
- 2) fossil fuel usage was akin to human slavery.

You remained silent when he made both statements. But how can you not say that this guy is getting over the top, particularly given your own sensitivity estimates and the fact that GHG forcing on climate is logarithmic, not linear, and the enhanced greenhouse signal is more about minimum (nighttime) temperatures going up rather than maximum (daytime) temps rising?

As far as you and him doing me a favor, I used my holiday to drive from Houston to College Station and back with a very top student from a very top high school where I volunteer teach each January. Dessler only came for lunch and declined a post-lunch visit. I bought lunch for everyone out of my own pocket. I paid you well at Enron for consulting--and arranged to pay you \$2,500 for speaking at two Houston events a couple of weeks after our lunch. Dessler did you a favor by coming to lunch--and he did me a favor through his favor to you. Fair enough?

The lunch was very valuable for all of us to understand Dr. Dessler's mindset. I was not impressed. He seems to be to be mad at the world and locked-in to a dangerously invasive, open-ended agenda of government planning in the name of 'stabilizing climate'.

Is Andrew Dessler even capable of agreeing with your views and not the IPCC's? Can he even admit that the possibility that the human influence on climate has strong positive effects--and maybe even net positive effects? As a scientist, can he not reasonably make a case that the balance of evidence is working against climate alarmism?

### **3. Being 'Mocked' in a Blog**

As I said to Steve McIntyre after spending hours trying to help him, then being mocked in his blog, "No good deed goes unpunished".

Not fair to me, whatever the story is with McIntyre.

My post did not mock you--it exposed you using your own quotations in a very public debate given your sign-on of the *Chronicle* op-ed. You mock yourself by leading a double life as a closet 'skeptic' of climate alarmism. Indeed, before the recent Houston debates, you emailed me on not associating you with climate alarmism--just climate concern.

Rob and Dick [Lindzen],  
Could we change it from "alarm" to "concern"? I won't be claiming alarm.  
Jerry North, January 4, 2010

Climate concern? A 'concernist' and not an 'alarmist'? Well, lots of us are concerned about all sorts of things that may or may not turn out to be real problems. On the public policy front, I am concerned about energy unaffordability, energy unreliability, energy poverty, carbon trade wars, cap-and-trade profiteering, bogus offsets, and an intrusive carbon bureaucracy. That is why I challenge Dessler and Joe Romm and the like on 'settled' alarmist physical science.

And have you not stated that climate change might be positive and not negative under some realistic scenarios? This gets us back to Mendelsohn. Mendelsohn + North = CO2 as a positive externality and certainly not a ruinously negative one.

My MasterResource blog documented how you have gone Far Left by joining alarmist Dessler in your criticism of the State of Texas petition against EPA.

This is probably the most sensitive sentence in my post: Yet Dr. North dare not advertise his dissent or what he believes is climate realism versus model-contrived climate and the resulting alarmism. But you have clear quotable views on climate sensitivity, climate model fudging, and extreme events. What else can you or I say other than I 'outed' you (sorry--but I had to...)? The ball is in your court for a rebuttal if I have misrepresented your views.

### **Responding to the Real Issues**

Can you directly respond to the key issues for the record? Climate alarmism and its adjunct, government activism, is a huge public policy issue. You and your Texas A&M colleagues are paid by the taxpayer and are knee deep in taxpayer-funded climate studies. You went public with Dessler in a very public way against the State of Texas despite your own caution against getting political. I think you owe a lot of us, and even the State of Texas, a forthright airing of your 'private' views.

Specifically,

1) Will you forthrightly explain your own 'best guess' sensitivity estimate and what it really means for the debate--and how your estimate is different from the IPCC and certainly Andy Dessler?

2) In light of #1, should the Texas A&M 'litmus' test of climate sensitivity

"If we do nothing to reduce our emissions of greenhouse gases, future warming

will likely be at least two degrees Celsius over the next century."

<http://www.met.tamu.edu/weather-and-climate/climate-change-statement>

be changed or even dropped? And is such 'political correctness' what you really want to subject your department too? (You might have to overrule Dessler on this....)

3) Will you respond to my analogy of Climategate and the bad behaviors at Enron, a company you got to know well? (See here: <http://climateaudit.org/2010/02/24/rob-bradley-climategate-from-an-enron-perspective/>).

[And speaking of Enron analogies, something crossed my mind when I tried to understand your going Left with Dessler post-Climategate. Remember how Ken Lay co-opted Enron's board of directors by giving them use of the company planes and other perks? Conflict of interest. Andy Dessler largely put together the conference in your honor last June (<http://atmo.tamu.edu/climate/index.html>). Just might this have clouded your judgment in a very public policy matter regarding the op-ed? Do you have the capability with your very close friendship with Andy to tell him "you have gone too far" or "that is not correct" or at least "be careful on that"? Just asking ... and this might be worth thinking about. Friendships and loyalty in place of a tough-love, challenge culture can lead to organizational failure as my forthcoming book, *Enron and Ken Lay: An American Tragedy*, will explain.]

4) I responded paragraph-by-paragraph and even line-by-line to your *Chronicle* op-ed critical of the State of Texas re the EPA endangerment finding. <http://www.masterresource.org/2010/03/reconsidering-the-desslernorth-op-ed/>. I put a lot of time into it. Your response? [Andy, your response?]

### **Correct Me On Any Particulars**

I am afraid to say anything more to you via email.

Let me have it--but on the substance only. You are a great, nice guy, and I ain't so bad myself. (Let's go to an Astros game after this is over....) I do not enjoy what I am doing here--or the conflicts I have found myself in with Rice's Baker Institute at Rice (the Neal Lane problem--we had to go around him/Baker to have your climate debate with Lindzen at Rice) or other conflicts that I find myself in (including at my high school that has had a huge political correctness problem that is now being addressed).

I did not enjoy fighting Enron on windpower and their other (BTW, all money losing) 'green' initiatives--I put my job at risk and was penalized financially for my views expressed inside and outside of the company (<http://www.politicalcapitalism.org/enron/>). If I was a 'whistleblower' at Enron, or if I am a 'whistleblower' on you, this email is a plea to deal with the issues and come clean. The time for hiding should be over. It's a new ball game post Climategate.

### **A Final Question (and sorry for having to ask it)**

*Are you an honest man in a partially dishonest profession?*

Are too many of your colleagues so imbued with an anti-industrial mentality, a back-to-nature mindset, and government dependence that alarms must be sounded and wagons circled when there is bad behavior, even cheating (Climategate)? Your scathing remarks about Tom Wigley of NCAR, for example (<http://masterresource.org/?p=735>, and other quotations I have not made public), a relatively clean Climategater, reveal that a number of scientists just don't have the temperament to be scholars and disinterested seekers of truth in the political fire.

Here is hoping that you step back, reevaluate things, and get back to your once noble work of finding the middle ground of the debate between ultra-skepticism and Dessler-style alarmism. Judith Curry could use some company--and maybe other 'closet skeptics' (or just 'closet non-alarmists') will have the courage to come forward. It's the best thing you could do for your profession and for your place in history. And now is the time.

- Rob

Robert L. Bradley Jr.  
CEO & Founder, Institute for Energy Research  
6219 Olympia Drive  
Houston, Texas 77057-3527  
Phone: 713-974-1918  
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IER Website: [www.energyrealism.org](http://www.energyrealism.org)  
Political Capitalism website: [www.politicalcapitalism.org](http://www.politicalcapitalism.org)  
Energy Blog: [www.MasterResource.org](http://www.MasterResource.org)

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**From:** Gerald North [mailto:  
**Sent:** Saturday, April 17, 2010 5:42 PM  
**To:** Robert Bradley  
**Cc:** Eric Berger; William Dawson; Andrew Dessler  
**Subject:** Re: Climate Model Post

**On Behalf Of** Gerald North

Rob,  
I really enjoyed the 'fact' that I saved you from being a 'climate alarmist'. Frankly, your descriptions of my colleague Andrew Dessler are outrageous. You seem to forget that he spent several hours tutoring you and your student from Kincade on climate change during a university holiday. As I said to Steve McIntyre after spending hours trying to help him, then being mocked in his blog, "No good deed goes unpunished". I am afraid to say anything more to you via email.  
Jerry

On Apr 16, 2010, at 9:26 AM, Robert Bradley wrote:

<http://www.masterresource.org/2010/04/climate-model-magic-washington->

[post-today-gerald-north-yesterday/](#)

in case you missed it.

- Rob

P.S. Jerry, if this post is not fair, let me (us) know.

Robert L. Bradley Jr.  
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Energy Blog: [www.MasterResource.org](http://www.MasterResource.org)

**From:** [Boslough, Mark B](#)  
**To:** ["Thomas Crowley"](#);  
**Cc:** [wigley@ucar.edu](#); [santer1@lnl.gov](#); ["Philip D. Jones"](#); ["Dr. Krishna AchutaRao"](#); ["Myles Allen"](#); ["Natalia Andronova"](#); ["Tim C Atkinson"](#); ["Rick Anthes"](#); ["Caspar Ammann"](#); ["David C. Bader"](#); ["Tim Barnett"](#); ["Eric Barron"](#); ["Bench, Graham"](#); ["Pat Berge"](#); ["George Boer"](#); ["Celine J. W. Bonfils"](#); ["Bono, James A."](#); ["James Boyle"](#); ["Ray Bradley"](#); ["Robin Bravender"](#); ["Keith Briffa"](#); ["Wolfgang Brueggemann"](#); ["Lisa Butler"](#); ["Ken Caldeira"](#); ["Peter Caldwell"](#); ["Dan Cayan"](#); ["Peter U. Clark"](#); ["Amy Clement"](#); ["Nancy Cole"](#); ["William Collins"](#); ["Tina Conrad"](#); ["Curtis Covey"](#); ["birte dar"](#); ["Davies Trevor Prof"](#); ["Jay Davis"](#); ["Tomas Diaz De La Rubia"](#); ["Andrew Dessler"](#); ["Mike Dettinger"](#); ["Phil Duffy"](#); ["Ehlenbach, Paul J."](#); ["Kerry Emanuel"](#); ["James Estes"](#); ["Eyring, Veronika"](#); ["David Fahey"](#); ["Chris Field"](#); ["Peter Foukal"](#); ["Melissa Free"](#); ["Julio Friedmann"](#); ["Bill Fulkerson"](#); ["Inez Fung"](#); ["Jeff Garberson"](#); ["PETER GENT"](#); ["Nathan Gillett"](#); ["peter gleckler"](#); ["Bill Goldstein"](#); ["Hal Graboske"](#); ["Paul Gross"](#); ["Tom Guilderson"](#); ["Leopold Haimberger"](#); ["Alex Hall"](#); ["James Hansen"](#); ["harvey"](#); ["Klaus Hasselmann"](#); ["Susan Joy Hassol"](#); ["Gabi Hegerl"](#); ["Isaac Held"](#); ["Bob Hirschfeld"](#); ["Jeremy Hobbs"](#); ["Dr. Elisabeth A. Holland"](#); ["Greg Holland"](#); ["Brian Hoskins"](#); ["mhughes"](#); ["James Hurrell"](#); ["Ken Jackson"](#); ["c.jakob@bom.gov.au"](#); ["Gardar Johannesson"](#); ["Helen Kang"](#); ["Thomas R Karl"](#); ["David Karoly"](#); ["Jeffrey Kiehl"](#); ["Steve Klein"](#); ["Knutti Reto"](#); ["John Lanzante"](#); ["wily@ucar.edu"](#); ["Ron Lehman"](#); ["John Lewis"](#); ["Lloyd, Steven A. \(GSFC-610.2\)"](#); ["R S INFORMATION SYSTEMS INCI"](#); ["Jane Long"](#); ["Janice Lough"](#); ["mann"](#); ["emaurer@scu.edu"](#); ["Linda Mearns"](#); ["carl mearns"](#); ["Jerry Meehl"](#); ["Jerry Melillo"](#); ["George Miller"](#); ["Norman Miller"](#); ["Art Mirin"](#); ["Mitchell, John FB"](#); ["Phil Mote"](#); ["Neville Nicholls"](#); ["Gerald R. North"](#); ["Astrid E.J. Ogilvie"](#); ["Stephanie Ohshita"](#); ["Tim Osborn"](#); ["Ostro, Stu"](#); ["j.palutikof@griffith.edu.au"](#); ["Joyce Penner"](#); ["Thomas C Peterson"](#); ["Tom Phillips"](#); ["David Pierce"](#); ["plattner@ipcc.unibe.ch"](#); ["V. Ramaswamy"](#); ["Ramanathan, Veerabhadran"](#); ["Sarah Raper"](#); ["Phil Rasch"](#); ["Kathryn Rauhut"](#); ["Doug Rotman"](#); ["Terry L. Root"](#); ["Sausen, Robert, DLR"](#); ["jsanter"](#); ["John Schellnhuber"](#); ["David Schimel"](#); ["Michael Schlesinger"](#); ["Gavin Schmidt"](#); ["Christina L. Schomer"](#); ["Stephen H Schneider"](#); ["Lynda Seaver"](#); ["Dian J. Seidel"](#); ["Ted Sheppard"](#); ["s.sherwood@unsw.edu.au"](#); ["Adrian Simmons"](#); ["soccianthony@epa.gov"](#); ["brian soden"](#); ["Susan Solomon"](#); ["Ken Sperber"](#); ["Anne Stark"](#); ["Thomas Stocker"](#); ["Ronald J Stouffer"](#); ["tswetnam@ltr.arizona.edu"](#); ["Karl Taylor"](#); ["claudia tebaldi"](#); ["Teixeira, Joao P"](#); ["Simon Tett"](#); ["Tombrello, Thomas A."](#); ["David Thompson"](#); ["Lonnie Thompson"](#); ["ELLEN THOMPSON"](#); ["Thorne, Peter"](#); ["Kevin E. Trenberth"](#); ["Mike Wallace"](#); ["Bud Ward"](#); ["Warrilow, David \(GA\)"](#); ["Warren Washington"](#); ["Andrew Weaver"](#); ["Michael Wehner"](#); ["Frank Wentz"](#); ["Whetton, Penny"](#); ["Dean N. Williams"](#); ["Gordon Yano"](#); ["Francis W. Zwiers"](#); ["Conway, Erik M"](#); ["Naomi Oreskes"](#); ["Sanjay Khanna"](#); ["Graham Cogley"](#); ["Jeffrey Kargel"](#); ["W. Crawford Elliott"](#); ["John Weyant"](#); ["Anthony Janetos"](#); ["Sowden, Alison"](#); ["Vernon Squire"](#); ["Eric Garen"](#); ["Peter Cross"](#); ["Charles Zeller"](#); ["Ian Murdoch"](#); ["Victoria A Arroyo"](#); ["Rashida Leonard"](#); ["Stephanie Fontenoy"](#); ["John Collee"](#); ["Sarah-jane Potts"](#); ["Greg Dutton"](#); ["Richard B. Rood"](#); ["Brien Seeley"](#); ["Mark Seeley"](#); ["Oliver Morton"](#); ["Cheryl H"](#); ["Richard Somerville"](#); ["Martin Heimann"](#); ["Don Kennedy"](#); ["Heidi Cullen"](#); ["Shari Bell"](#); ["Rebecca Bratspies"](#); ["Pete Myers"](#); ["Michael Oppenheimer"](#); ["Paul Edwards"](#)  
**Subject:** RE: On "good deeds"  
**Date:** Thursday, April 15, 2010 2:08:47 PM

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Folks,

In my presentation to our local New Mexico skeptics group last night, I asked a volunteer from the audience to read passages from the dendroclimatology section of Bradley's textbook (using my hardcover copy, in which I had highlighted the relevant parts). Then I had another volunteer read passages from the Wegman report (in which I had highlighted parallel sentences). I asked the audience to pretend they were professors, and asked them if they would suspect plagiarism if this were a student report. There was a strong consensus of the people present that the evidence merits a plagiarism investigation (the president of the skeptics group has written some plagiarism-detection software and is going to see how it scores). I think this experiment had a bigger effect on the audience's perception of "who do you trust?" than a one-hour lecture on the scientific evidence would have had.

Prof. Wegman may be a nice guy and a competent statistician. He had two coauthors, so he may not have had any role in the authorship of the three pages of the report that appear to have been plagiarized from Bradley. But it is my opinion that evidence for academic misconduct in a report to Congress is worthy of scrutiny, particularly in light of the evidence that members of the Wegman panel had also been coached by a partisan Congressional staffer, which would be improper and possibly illegal.

I don't view this as "tit for tat" or fighting fire with fire. It is simply not fair for climate scientists to be held to a higher standard than their detractors.

The way to win minds is "just the facts" and the climate science community already is doing a good job winning minds by publishing papers, presenting results at scientific conferences, and defending the science in essays and blogs like realclimate. But I am convinced that the real battle is for hearts, in which case there must be an appeal to fairness, with the question "who do you trust?". Moreover,

there isn't a lot of press interest in misconduct associated with the Barton investigation, whereas "climategate" email messages that were sent before 2006 made banner headlines (and the "retraction" based on yesterday's news merited a small item on page 3 of today's Albuquerque Journal, which still used a back-handed double-negative). It is painfully obvious that there is an extreme media double standard and a bias against scientists.

I think we need to draw attention to this problem, ask for fairness in reporting, and most of all, appeal to fair-mindedness when we talk to the public.

Mark

> -----Original Message-----

> From: Thomas Crowley [<mailto:thomas.crowley@ed.ac.uk>]

> Sent: Thursday, April 15, 2010 10:46 AM

> To:

> Cc: wigley@ucar.edu; santer1@llnl.gov; 'Philip D. Jones';

> Subject: RE: On "good deeds"

>

> Quoting "John R. Mashey" <

>

> I was at the congressional meeting in which wegman spoke - at

> least I am pretty sure it was wegman - I actually liked him

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>

> would really not like to see him carved up - prefer keeping

> any discussion just 'the facts, ma'am'

>

> tom

>

>

**From:** [Thomas Crowley](#)  
**To:**  
**Cc:** [wigley@ucar.edu](#); [santer1@lnl.gov](#); "Philip D. Jones"; "Dr. Krishna AchutaRao"; "Myles Allen"; "Natalia Andronova"; "Tim C Atkinson"; "Rick Anthes"; "Caspar Ammann"; "David C. Bader"; "Tim Barnett"; "Eric Barron"; "Bench, Graham"; "Pat Berge"; "George Boer"; "Celine J. W. Bonfils"; "Bono, James A."; "Boslough, Mark B"; "James Boyle"; "Ray Bradley"; "Robin Bravender"; "Keith Briffa"; "Wolfgang Brueggemann"; "Lisa Butler"; "Ken Caldeira"; "Peter Caldwell"; "Dan Cayan"; "Peter U. Clark"; "Amy Clement"; "Nancy Cole"; "William Collins"; "Tina Conrad"; "Curtis Covey"; "birte dar"; "Davies Trevor Prof"; "Jay Davis"; "Tomas Diaz De La Rubia"; "Andrew Dessler"; "Mike Dettinger"; "Phil Duffy"; "Ehlenbach, Paul J."; "Kerry Emanuel"; "James Estes"; "Eyring, Veronika"; "David Fahey"; "Chris Field"; "Peter Foukal"; "Melissa Free"; "Julio Friedmann"; "Bill Fulkerson"; "Inez Fung"; "Jeff Garberson"; "PETER GENT"; "Nathan Gillett"; "peter gleckler"; "Bill Goldstein"; "Hal Graboske"; "Paul Gross"; "Tom Guilderson"; "Leopold Haimberger"; "Alex Hall"; "James Hansen"; "harvey"; "Klaus Hasselmann"; "Susan Joy Hassol"; "Gabi Hegerl"; "Isaac Held"; "Bob Hirschfeld"; "Jeremy Hobbs"; "Dr. Elisabeth A. Holland"; "Greg Holland"; "Brian Hoskins"; "mhughes"; "James Hurrell"; "Ken Jackson"; [c.jakob@bom.gov.au](mailto:c.jakob@bom.gov.au); "Gardar Johannesson"; "Helen Kang"; "Thomas R Karl"; "David Karoly"; "Jeffrey Kiehl"; "Steve Klein"; "Knutti Reto"; "John Lanzante"; [wily@ucar.edu](#); "Ron Lehman"; "John Lewis"; "Lloyd, Steven A. (GSFC-610.2) [R S INFORMATION SYSTEMS INCL]"; "Jane Long"; "Janice Lough"; "mann"; [emaurer@scu.edu](mailto:emaurer@scu.edu); "Linda Mearns"; "carl mears"; "Jerry Meehl"; "Jerry Melillo"; "George Miller"; "Norman Miller"; "Art Mirin"; "Mitchell, John FB"; "Phil Mote"; "Neville Nicholls"; "Gerald R. North"; "Astrid E.J. Ogilvie"; "Stephanie Ohshita"; "Tim Osborn"; "Ostro, Stu"; [j.palutikof@griffith.edu.au](mailto:j.palutikof@griffith.edu.au); "Joyce Penner"; "Thomas C Peterson"; "Tom Phillips"; "David Pierce"; [plattner@ipcc.unibe.ch](mailto:plattner@ipcc.unibe.ch); "V. Ramaswamy"; "Ramanathan, Veerabhadran"; "Sarah Raper"; "Phil Rasch"; "Kathryn Rauhut"; "Doug Rotman"; "Terry L. Root"; "Sausen, Robert, DLR"; "isanter"; "John Schellnhuber"; "David Schimel"; "Michael Schlesinger"; "Gavin Schmidt"; "Christina L. Schomer"; "Stephen H Schneider"; "Lynda Seaver"; "Dian J. Seidel"; "Ted Sheppard"; [s.sherwood@unsw.edu.au](mailto:s.sherwood@unsw.edu.au); "Adrian Simmons"; [socci.anthony@epa.gov](mailto:socci.anthony@epa.gov); "brian soden"; "Susan Solomon"; "Ken Sperber"; "Anne Stark"; "Thomas Stocker"; "Ronald J Stouffer"; [tswetnam@ltrr.arizona.edu](mailto:tswetnam@ltrr.arizona.edu); "Karl Taylor"; "claudia tebaldi"; "Teixeira, Joao P."; "Simon Tett"; "Tombrello, Thomas A."; "David Thompson"; "Lonnie Thompson"; "ELLEN THOMPSON"; "Thorne, Peter"; "Kevin E. Trenberth"; "Mike Wallace"; "Bud Ward"; "Warrilow, David (GA)"; "Warren Washington"; "Andrew Weaver"; "Michael Wehner"; "Frank Wentz"; "Whetton, Penny"; "Dean N. Williams"; "Gordon Yano"; "Francis W. Zwiers"; "Conway, Erik M"; "Naomi Oreskes"; "Sanjay Khanna"; "Graham Cogley"; "Jeffrey Kargel"; "W. Crawford Elliott"; "John Weyant"; "Anthony Janetos"; "Sowden, Alison"; "Vernon Squire"; "Eric Garen"; "Peter Cross"; "Charles Zeller"; "Ian Murdock"; "Victoria A Arroyo"; "Rashida Leonard"; "Stephanie Fontenoy"; "John Collee"; "Sarah-jane Potts"; "Greg Dutton"; "Richard B. Rood"; "Brien Seeley"; "Mark Seeley"; "Oliver Morton"; "Cheryl H"; "Richard Somerville"; "Martin Heimann"; "Don Kennedy"; "Heidi Cullen"; "Shari Bell"; "Rebecca Bratspies"; "Pete Myers"; "Michael Oppenheimer"; "Paul Edwards"  
**Subject:** RE: On "good deeds"  
**Date:** Thursday, April 15, 2010 11:57:23 AM

---

Quoting "John R. Mashey" <

I was at the congressional meeting in which wegman spoke - at least I am pretty sure it was wegman - I actually liked him and dont think he has a big ego or a big grudge. I think he is a good statistician but I dont think he has much experience with geostatistical problems

would really not like to see him carved up - prefer keeping any discussion just 'the facts, ma'am'

tom

> Speaking as an external observer of all this:

>

> 1) First, for Dr. Jones, I too am happy to see this result. I've known Ron Oxburgh for years, so I wasn't surprised to see a sensible and sometimes blunt result.

>

> 2) re: Professor Hand: In 2006, I think Ed Wegman & co tried to manufacture a fight between statisticians and climate scientists. I don't think that effort really got very far (statisticians are mostly smarter than that), but > I offer a few suggestions on tactics to avoid it.

>

> 3) In my experience, when professional statisticians (or professional software engineers) look at research (or software written for research), it > is \*almost guaranteed\* that many will say:

- > "Could be better, should have more involvement from statisticians (software engineers)."
- >
- > I think this comment usually arises from (commendable) desire for excellence
- > of application of one's own specialty. "Self-serving" might sometimes be
- > true, but is probably not a productive argument, as it plays into the wrong
- > people's hands. Specialists often focus on making their part of something
- > excellent, but sometimes without seeing the broader context.
- >
- > By contrast, I love John Tukey's quote:
- > "?Far better an approximate answer to the right question, which is often
- > vague, than an exact answer to the wrong question, which can always be made
- > precise."
- >
- > 4) "Ignorance" might be also true, but ignorance can be fixed. Three
- > flavors are apparent:
- >
- > a) Some statisticians naturally do not understand the extent of existing
- > interaction between climate scientists and statisticians. (Parallel: many
- > software engineers don't understand the differences between research
- > software and production-grade software products.)
- >
- > b) If they get focussed on minutiae of statistics (software engineering),
- > some forget about funding realities in most institutions. I worked at Bell
- > Labs for 10 years. We could fund world-class statisticians (like Tukey,
- > Joe Kruskal, John Chambers ("S" => "R" language), part of whose explicit
- > mission was to help others use good statistics, not quite so often the
- > charter in academe. Managers also knew the difference between "Perfect" and
- > "Good enough, soon enough, at reasonable cost." Even with (very nice!)
- > monopoly money, one could not fund everything.
- >
- > c) Statisticians (and those generally focused on specific base
- > methodologies) sometimes over-generalize from experiences in one science
- > discipline into another. Wegman's group seems to have charged into (human)
- > social network analysis without talking to sociologists much, while
- > crunching away with math they'd been using for analyzing computer networks.
- >
- > 5) So, as some of you have done, you might consider saying things like:
- >
- > a) We often already work with good statisticians, but we would happily
- > accept funding to do more.
- >
- > b) Climate science has many interesting statistics problems, so send over
- > grad students with relevant science backgrounds. We'll happily visit the
- > stats department and offer occasional seminars on our sorts of problems and
- > suggest courses to be taken to get the relevant backgrounds.
- >
- > c) We'd like to talk to the stats department about course material that is
- > relevant to our sorts of research. [In many universities, typical stats
- > courses, especially introductory ones, seem more optimized for social
- > sciences than anything else. Students sometimes avoid them, or other
- > departments end up teaching their own, tuned to the needs of their own
- > students.]
- >
- > Some of these (good) things might occasionally even happen :-> ... but
- > simply taking a consistent stance like this might well defuse potential
- > fights people are trying to manufacture and that suck in statisticians who
- > say what they almost always say :->)
- >
- > For more, the attached 1-page PDF Essay " Statistics and Statisticians -

> Opinions" was extracted from  
> <http://www.desmogblog.com/crescendo-climategate-cacophony> that some of you  
> have seen.  
>  
> 6) But really, some people \*want\* statisticians to get pulled into fights  
> with climate science, and it seems easy enough to avoid.  
>  
>  
>  
>  
>

--  
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Scotland, with registration number SC005336.

**From:**

[Gabi Hegerl](#)

**To:**

**Cc:**

[wigley@ucar.edu](#); [santer1@lnl.gov](#); "Philip D. Jones"; "Dr. Krishna AchutaRao"; "Myles Allen"; "Natalia Andronova"; "Tim C Atkinson"; "Rick Anthes"; "Caspar Ammann"; "David C. Bader"; "Tim Barnett"; "Eric Barron"; "Bench, Graham"; "Pat Berge"; "George Boer"; "Celine J. W. Bonfils"; "Bono, James A."; "Boslough, Mark B"; "James Boyle"; "Ray Bradley"; "Robin Bravender"; "Keith Briffa"; "Wolfgang Brueggemann"; "Lisa Butler"; "Ken Caldeira"; "Peter Caldwell"; "Dan Cayan"; "Peter U. Clark"; "Amy Clement"; "Nancy Cole"; "William Collins"; "Tina Conrad"; "Curtis Covey"; "Thomas Crowley"; "birte dar"; "Davies Trevor Prof"; "Jay Davis"; "Tomas Diaz De La Rubia"; "Andrew Dessler"; "Mike Dettinger"; "Phil Duff"; "Ehlenbach, Paul J."; "Kerry Emanuel"; "James Estes"; "Eyring, Veronika"; "David Fahey"; "Chris Field"; "Peter Foukal"; "Melissa Free"; "Julio Friedmann"; "Bill Fulkerson"; "Inez Fung"; "Jeff Garberson"; "PETER GENT"; "Nathan Gillett"; "peter gleckler"; "Bill Goldstein"; "Hal Graboske"; "Paul Gross"; "Tom Guilderson"; "Leopold Haimberger"; "Alex Hall"; "James Hansen"; "harvey"; "Klaus Hasselmann"; "Susan Joy Hassol"; "Isaac Held"; "Bob Hirschfeld"; "Jeremy Hobbs"; "Dr. Elisabeth A. Holland"; "Greg Holland"; "Brian Hoskins"; "mhughes"; "James Hurrell"; "Ken Jackson"; [c.jakob@bom.gov.au](#); "Gardar Johannesson"; "Helen Kang"; "Thomas R Karl"; "David Karoly"; "Jeffrey Kiehl"; "Steve Klein"; "Knutti Reto"; "John Lanzante"; [wily@ucar.edu](#); "Ron Lehman"; "John Lewis"; "Lloyd, Steven A. (GSFC-610.2)[R S INFORMATION SYSTEMS INC]"; "Jane Long"; "Janice Lough"; "mann"; [emaurer@scu.edu](#); "Linda Mearns"; "carl mears"; "Jerry Meehl"; "Jerry Melillo"; "George Miller"; "Norman Miller"; "Art Mirin"; "Mitchell, John FB"; "Phil Mote"; "Neville Nicholls"; "Gerald R. North"; "Astrid E.J. Ogilvie"; "Stephanie Ohshita"; "Tim Osborn"; "Ostro, Stu"; [j.palutikof@griffith.edu.au](#); "Joyce Penner"; "Thomas C Peterson"; "Tom Phillips"; "David Pierce"; [plattner@ipcc.unibe.ch](#); "V. Ramaswamy"; "Ramanathan, Veerabhadran"; "Sarah Raper"; "Phil Rasch"; "Kathryn Rauhut"; "Doug Rotman"; "Terry L. Root"; "Sausen, Robert, DLR"; "isanter"; "John Schellnhuber"; "David Schimel"; "Michael Schlesinger"; "Gavin Schmidt"; "Christina L. Schomer"; "Stephen H Schneider"; "Lynda Seaver"; "Dian J. Seidel"; "Ted Sheppard"; [s.sherwood@unsw.edu.au](#); "Adrian Simmons"; [soggi.anthony@epa.gov](#); "brian soden"; "Susan Solomon"; "Ken Sperber"; "Anne Stark"; "Thomas Stocker"; "Ronald J Stouffer"; [tswetnam@ltrr.arizona.edu](#); "Karl Taylor"; "claudia tebaldi"; "Teixeira, Joao P"; "Simon Tett"; "Tombrello, Thomas A."; "David Thompson"; "Lonnie Thompson"; "ELLEN THOMPSON"; "Thorne, Peter"; "Kevin E. Trenberth"; "Mike Wallace"; "Bud Ward"; "Warrilow, David (GA)"; "Warren Washington"; "Andrew Weaver"; "Michael Wehner"; "Frank Wentz"; "Whetton, Penny"; "Dean N. Williams"; "Gordon Yano"; "Francis W. Zwiers"; "Conway, Erik M"; "Naomi Oreskes"; "Sanjay Khanna"; "Graham Cogley"; "Jeffrey Kargel"; "W. Crawford Elliott"; "John Weyant"; "Anthony Janetos"; "Sowden, Alison"; "Vernon Squire"; "Eric Garen"; "Peter Cross"; "Charles Zeller"; "Ian Murdock"; "Victoria A Arroyo"; "Rashida Leonard"; "Stephanie Fontenoy"; "John Collee"; "Sarah-jane Potts"; "Greg Dutton"; "Richard B. Rood"; "Brien Seeley"; "Mark Seeley"; "Oliver Morton"; "Cheryl H"; "Richard Somerville"; "Martin Heimann"; "Don Kennedy"; "Heidi Cullen"; "Shari Bell"; "Rebecca Bratspies"; "Pete Myers"; "Michael Oppenheimer"; "Paul Edwards"

**Subject:**

Re: On "good deeds"

**Date:**

Thursday, April 15, 2010 11:55:46 AM

Excellent points! There is a long-standing tradition of collaboration between stats and climate research, eg the NCAR postdoc program, there are lots of projects involving statisticians (I am on several), and strings of meetings (one of them, the International Meeting on Statistical Climatology, is going into its 11th round this July, and aims at bringing together statisticians and climate people. Very good attendance, I am drowning in abstracts for this years version in Edinburgh - sorry for the plug for this meeting but it was hard to resist (more on my personal home page)!) there are also a number of high profile people with a stats background (eg Francis Zwiers, Claudia Tebaldi) who actively publish in climate research.

So it seems that neither this particular statistician, nor Wegman, are well informed

Gabi

John R. Mashey wrote:

> Speaking as an external observer of all this:

>

> 1) First, for Dr. Jones, I too am happy to see this result. I've known Ron

> Oxburgh for years, so I wasn't surprised to see a sensible and sometimes

- > blunt result.
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- > 2) re: Professor Hand: In 2006, I think Ed Wegman & co tried to manufacture
- > a fight between statisticians and climate scientists. I don't think that
- > effort really got very far (statisticians are mostly smarter than that), but
- > I offer a few suggestions on tactics to avoid it.
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- > 3) In my experience, when professional statisticians (or professional
- > software engineers) look at research (or software written for research), it
- > is \*almost guaranteed\* that many will say:
- > "Could be better, should have more involvement from statisticians (software
- > engineers)."
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- > I think this comment usually arises from (commendable) desire for excellence
- > of application of one's own specialty. "Self-serving" might sometimes be
- > true, but is probably not a productive argument, as it plays into the wrong
- > people's hands. Specialists often focus on making their part of something
- > excellent, but sometimes without seeing the broader context.
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- > By contrast, I love John Tukey's quote:
- > "--Far better an approximate answer to the right question, which is often
- > vague, than an exact answer to the wrong question, which can always be made
- > precise."
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- > 4) "Ignorance" might be also true, but ignorance can be fixed. Three
- > flavors are apparent:
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- > a) Some statisticians naturally do not understand the extent of existing
- > interaction between climate scientists and statisticians. (Parallel: many
- > software engineers don't understand the differences between research
- > software and production-grade software products.)
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- > b) If they get focussed on minutiae of statistics (software engineering),
- > some forget about funding realities in most institutions. I worked at Bell
- > Labs for 10 years. We could fund world-class statisticians (like Tukey,
- > Joe Kruskal, John Chambers ("S" => "R" language), part of whose explicit
- > mission was to help others use good statistics, not quite so often the
- > charter in academe. Managers also knew the difference between "Perfect" and
- > "Good enough, soon enough, at reasonable cost." Even with (very nice!)
- > monopoly money, one could not fund everything.
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- > c) Statisticians (and those generally focused on specific base
- > methodologies) sometimes over-generalize from experiences in one science
- > discipline into another. Wegman's group seems to have charged into (human)
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- > 5) So, as some of you have done, you might consider saying things like:
- >
- > a) We often already work with good statisticians, but we would happily
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- > grad students with relevant science backgrounds. We'll happily visit the
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- >
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- > say what they almost always say :-)
- >
- > For more, the attached 1-page PDF Essay " Statistics and Statisticians -
- > Opinions" was extracted from
- > <http://www.desmogblog.com/crescendo-climategate-cacophony> that some of you
- > have seen.
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- > 6) But really, some people \*want\* statisticians to get pulled into fights
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- >
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- >
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**Cc:** "[Philip D. Jones](#)"; "[Dr. Krishna AchutaRao](#)"; "[Myles Allen](#)"; "[Natalia Andronova](#)"; "[Tim C Atkinson](#)"; "[Rick Anthes](#)"; "[Caspar Ammann](#)"; "[David C. Bader](#)"; "[Tim Barnett](#)"; "[Eric Barron](#)"; "[Bench, Graham](#)"; "[Pat Berge](#)"; "[George Boer](#)"; "[Celine J. W. Bonfils](#)"; "[Bono, James A.](#)"; "[Boslough, Mark B](#)"; "[James Boyle](#)"; "[Ray Bradley](#)"; "[Robin Bravender](#)"; "[Keith Briffa](#)"; "[Wolfgang Brueggemann](#)"; "[Lisa Butler](#)"; "[Ken Caldeira](#)"; "[Peter Caldwell](#)"; "[Dan Cayan](#)"; "[Peter U. Clark](#)"; "[Amy Clement](#)"; "[Nancy Cole](#)"; "[William Collins](#)"; "[Tina Conrad](#)"; "[Curtis Covey](#)"; "[Thomas Crowley](#)"; "[birte dar](#)"; "[Davies Trevor Prof](#)"; "[Jay Davis](#)"; "[Tomas Diaz De La Rubia](#)"; "[Andrew Dessler](#)"; "[Mike Dettinger](#)"; "[Phil Duffy](#)"; "[Ehlenbach, Paul J.](#)"; "[Kerry Emanuel](#)"; "[James Estes](#)"; "[Eyring, Veronika](#)"; "[David Fahey](#)"; "[Chris Field](#)"; "[Peter Foukal](#)"; "[Melissa Free](#)"; "[Julio Friedmann](#)"; "[Bill Fulkerson](#)"; "[Inez Fung](#)"; "[Jeff Garberson](#)"; "[PETER GENT](#)"; "[Nathan Gillett](#)"; "[peter gleckler](#)"; "[Bill Goldstein](#)"; "[Hal Graboske](#)"; "[Paul Gross](#)"; "[Tom Guilderson](#)"; "[Leopold Haimberger](#)"; "[Alex Hall](#)"; "[James Hansen](#)"; "[harvey](#)"; "[Klaus Hasselmann](#)"; "[Susan Joy Hassol](#)"; "[Gabi Hegerl](#)"; "[Isaac Held](#)"; "[Bob Hirschfeld](#)"; "[Jeremy Hobbs](#)"; "[Dr. Elisabeth A. Holland](#)"; "[Greg Holland](#)"; "[Brian Hoskins](#)"; "[mhughes](#)"; "[James Hurrell](#)"; "[Ken Jackson](#)"; "[c.jakob@bom.gov.au](#)"; "[Gardar Johannesson](#)"; "[Helen Kang](#)"; "[Thomas R Karl](#)"; "[David Karoly](#)"; "[Jeffrey Kiehl](#)"; "[Steve Klein](#)"; "[Knutti Reto](#)"; "[John Lanzante](#)"; "[wily@ucar.edu](#)"; "[Ron Lehman](#)"; "[John Lewis](#)"; "[Lloyd, Steven A. \(GSFC-610.2\)](#)"[R S INFORMATION SYSTEMS INC]; "[Jane Long](#)"; "[Janice Lough](#)"; "[mann](#)"; "[emaurer@scu.edu](#)"; "[Linda Mearns](#)"; "[carl mears](#)"; "[Jerry Meehl](#)"; "[Jerry Melillo](#)"; "[George Miller](#)"; "[Norman Miller](#)"; "[Art Mirin](#)"; "[Mitchell, John FB](#)"; "[Phil Mote](#)"; "[Neville Nicholls](#)"; "[Gerald R. North](#)"; "[Astrid E.J. Ogilvie](#)"; "[Stephanie Ohshita](#)"; "[Tim Osborn](#)"; "[Ostro, Stu](#)"; "[j.palutikof@griffith.edu.au](#)"; "[Joyce Penner](#)"; "[Thomas C Peterson](#)"; "[Tom Phillips](#)"; "[David Pierce](#)"; "[plattner@ipcc.unibe.ch](#)"; "[V. Ramaswamy](#)"; "[Ramanathan, Veerabhadran](#)"; "[Sarah Raper](#)"; "[Phil Rasch](#)"; "[Kathryn Rauhut](#)"; "[Doug Rotman](#)"; "[Terry L. Root](#)"; "[Sausen, Robert, DLR](#)"; "[jsanter](#)"; "[John Schellnhuber](#)"; "[David Schimel](#)"; "[Michael Schlesinger](#)"; "[Gavin Schmidt](#)"; "[Christina L. Schomer](#)"; "[Stephen H Schneider](#)"; "[Lynda Seaver](#)"; "[Dian J. Seidel](#)"; "[Ted Sheppard](#)"; "[s.sherwood@unsw.edu.au](#)"; "[Adrian Simmons](#)"; "[socci.anthony@epa.gov](#)"; "[brian soden](#)"; "[Susan Solomon](#)"; "[Ken Sperber](#)"; "[Anne Stark](#)"; "[Thomas Stocker](#)"; "[Ronald J Stouffer](#)"; "[tswetnam@ltrr.arizona.edu](#)"; "[Karl Taylor](#)"; "[claudia tebaldi](#)"; "[Teixeira, Joao P](#)"; "[Simon Tett](#)"; "[Tombrello, Thomas A.](#)"; "[David Thompson](#)"; "[Lonnie Thompson](#)"; "[ELLEN THOMPSON](#)"; "[Thorne, Peter](#)"; "[Kevin E. Trenberth](#)"; "[Mike Wallace](#)"; "[Bud Ward](#)"; "[Warrilow, David \(GA\)](#)"; "[Warren Washington](#)"; "[Andrew Weaver](#)"; "[Michael Wehner](#)"; "[Frank Wentz](#)"; "[Whetton, Penny](#)"; "[Dean N. Williams](#)"; "[Gordon Yano](#)"; "[Francis W. Zwiers](#)"; "[Conway, Erik M](#)"; "[Naomi Oreskes](#)"; "[Sanjay Khanna](#)"; "[Graham Cogley](#)"; "[Jeffrey Kargel](#)"; "[W. Crawford Elliott](#)"; "[John Weyant](#)"; "[Anthony Janetos](#)"; "[Sowden, Alison](#)"; "[Vernon Squire](#)"; "[Eric Garen](#)"; "[Peter Cross](#)"; "[Charles Zeller](#)"; "[Ian Murdoch](#)"; "[Victoria A Arroyo](#)"; "[Rashida Leonard](#)"; "[Stephanie Fontenoy](#)"; "[John Collee](#)"; "[Sarah-jane Potts](#)"; "[Greg Dutton](#)"; "[Richard B. Rood](#)"; "[Brien Seeley](#)"; "[Mark Seeley](#)"; "[Oliver Morton](#)"; "[Cheryl H](#)"; "[Richard Somerville](#)"; "[Martin Heimann](#)"; "[Don Kennedy](#)"; "[Heidi Cullen](#)"; "[Shari Bell](#)"; "[Rebecca Bratspies](#)"; "[Pete Myers](#)"; "[Michael Oppenheimer](#)"; "[Paul Edwards](#)"

**Subject:** RE: On "good deeds"  
**Date:** Thursday, April 15, 2010 11:23:58 AM  
**Attachments:** [Page.172. crescendo.climategate.cacophony.v1.0.pdf](#)

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By contrast, I love John Tukey's quote:  
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6) But really, some people \*want\* statisticians to get pulled into fights with climate science, and it seems easy enough to avoid.

#### A.10.4 Statistics and Statisticians - Opinions

This is not yet another rehash of the old arguments. It just background, so the reader might easily skip it. I offer general comments derived from trying to model my thinking after John Tukey [TUK1977], one of the world's greatest statisticians, who long worked at Princeton and Bell Labs. The latter used statistics extensively. It employed world-class statisticians whose jobs also included helping many others do better statistics. He was a strong proponent of balancing well-known confirmatory statistics with exploratory data analysis, on which much science depends. Some of my favorite quotes of his are, via:

[en.wikiquote.org/wiki/John\\_Tukey](http://en.wikiquote.org/wiki/John_Tukey)

“The combination of some data and an aching desire for an answer does not ensure that a reasonable answer can be extracted from a given body of data.”

“Far better an approximate answer to the right question, which is often vague, than an exact answer to the wrong question, which can always be made precise.”

Since he is deceased, we cannot ask him what he would have thought about {MBH98, MBH99, MM05, WR}. I worked at Bell Labs 1973-1983, as an MTS and then Supervisor. Papers to be published externally first needed reviews by 2 other divisions, and those reviews were widely regarded as tougher than external peer review in good journals. Papers went up the authors' management chain to Executive Director, then to two other Executive Directors, in whose organizations reviewers were found. Reviews returned through those EDs, back to one's own ED, and then down through the management chain to the author(s). I once approved a (very negative) review by one of my subordinates, which caused my ED to write a note to the authors' ED saying “Once again, I am forced to reject a paper that my people think is junk, and I agree.” Negative letters, passed through the authors' entire management chain, were not usually viewed as career plusses. Papers with substantial statistics inevitably got reviewed by Tukey or his associates, so his worldview was known.

*I guess that he would have thought MBH98/99 got reasonable, if approximate answers, even if some statistics were flawed, because the flaws didn't really make a significant difference. Those papers helped point the way for further research that generally confirmed and refined the earlier work. Statistical methods improved meanwhile. I think he would have found successive paleoclimate reconstructions to be good, interesting science and fascinating examples of extracting signal from noise, a subject in which he had some expertise.*

Tukey cared deeply about using statistics to help science find better answers. *I think he would be utterly appalled at endless wallowing in statistical minutiae in ways guaranteed to obscure insight, especially years after real science had moved on. Of course, all this is just my opinion and it could be totally wrong, but if someone disagrees without exposure to him, they should try reading the first few pages of that book, still a classic, even if paper-and-pencil have been supplanted by computers.*

*I have long heard complaints from statisticians about not getting consulted enough. In fact, that is often a legitimate complaint. I have personally fought a long, partially-successful battle to introduce more statistical methods into one of my old fields, computer architecture. However, most places, especially universities, lack enough statisticians to spend much time in long domain-specific joint analyses, although many statistics departments admirably provide some outreach and statistical support for others. Academic statisticians often publish in statistics journals, not unfamiliar ones where paleoclimate reconstructions might appear. Universities rarely insist on multiple-department internal review before allowing submission of a paper externally. Even if they did, nobody has the time to do that often.*

*Bell Labs was rare in having world-class statisticians who not only did their own research, but helped other employees, reviewed papers, and built tools to help non-statisticians do better statistics. (John Chambers' S, predecessor of R, came from the same organization as Tukey.) I would be ecstatic to see higher statistical literacy and skill, but sometimes statisticians also need more context about the science. Not understanding the science may well be more problematic than not being perfect on the statistics.*

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**To:** [wigley@ucar.edu](mailto:wigley@ucar.edu); [santer1@lnl.gov](mailto:santer1@lnl.gov)  
**Cc:** [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench, Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [Boslough, Mark B](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); ["Ken Caldeira"](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [Thomas Crowley](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Mike Dettinger](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](mailto:wily@ucar.edu); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A. \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [emaurer@scu.edu](mailto:emaurer@scu.edu); [Linda Mearns](#); [carl mearns](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Ostro, Stu](#); [j.palutikof@griffith.edu.au](mailto:j.palutikof@griffith.edu.au); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](mailto:plattner@ipcc.unibe.ch); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert, DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); ["Michael Schlesinger"](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Stephen H Schneider](#); [Lynda Seaver](#); ["Dian J. Seidel"](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](mailto:s.sherwood@unsw.edu.au); [Adrian Simmons](#); [socci.anthony@epa.gov](mailto:socci.anthony@epa.gov); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](mailto:tswetnam@ltrr.arizona.edu); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); ["Kevin E. Trenberth"](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); ["Francis W. Zwiers"](#); [Conway, Erik M](#); [Naomi Oreskes](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [Eric Garen](#); ["Peter Cross"](#); ["Charles Zeller"](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); ["Greg Dutton"](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard Somerville](#); [Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#); [Paul Edwards](#)  
**Subject:** Re: On "good deeds"  
**Date:** Thursday, April 15, 2010 3:38:13 AM

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Tom et al,

<http://www.newscientist.com/article/dn18776-climategate-scientists-chastised-over-statistics.html>

Above is how Hand went a stage further - providing succour to the skeptics!

<http://www.guardian.co.uk/environment/2010/apr/14/oxburgh-uea-cleared-malpractice/print>

<http://www.guardian.co.uk/commentisfree/2010/apr/15/climate-science-hacked-emails/print>

Above are two more awful pieces of journalism from the paper I used to read! What point is the Guardian trying to make.

I've finally got the point - they are trying to sell a product, which they call a newspaper.

Thanks for all the support!

Phil

At 08:53 15/04/2010, wigley@ucar.edu wrote:

>Phil (and others)

>

>The Oxburgh report was good to see. Peiser's comments predictable.

>  
>But Prof. Hand's statement about more contact with statisticians was  
>both self-serving and ignorant.  
>  
>Tom  
>(from Borneo)  
>  
>+++++++  
>> Dear Phil,  
>>  
>> I was very gratified to read the report released earlier today by Lord  
>> Oxburgh. The report affirms the integrity and reliability of the  
>> scientific research that you and your colleagues conducted at the  
>> University of East Anglia's Climatic Research Unit (CRU).  
>>  
>> I am hopeful that the difficult times you have faced are now approaching  
>> an end, and that you will be able to return to full-time scientific  
>> research in the near future.  
>>  
>> 14 years ago, during the peak of my IPCC difficulties, I read a poem in  
>> a book about Robert Oppenheimer. I've never forgotten the poem. It is  
>> now on one of the walls in my office:  
>>  
>> "In the forest, in battle, in the midst of arrows, javelins, fire,  
>> Out on the great sea, at the precipice's edge in the mountains,  
>> In sleep, in delirium, in deep trouble  
>> The good deeds a man has done before defend him."  
>>  
>> Phil, you have done many "good deeds" over the course of your scientific  
>> career. These "good deeds" are manifest in your science, in your  
>> tireless service on behalf of the IPCC, in your mentoring of young  
>> scientists, and in many other aspects of your career.  
>>  
>> These good deeds defend you now, and will continue to defend you in the  
>> future.  
>>  
>> You deserve the thanks of the entire scientific community.  
>>  
>> With best personal wishes,  
>>  
>> Ben  
>>  
>-----  
>> Benjamin D. Santer  
>> Program for Climate Model Diagnosis and Intercomparison  
>> Lawrence Livermore National Laboratory  
>> P.O. Box 808, Mail Stop L-103  
>> Livermore, CA 94550, U.S.A.  
>> Tel: (925) 422-3840  
>> FAX: (925) 422-7675  
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>-----  
>>

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Norwich, NR4 7TJ, UK Email p.jones@uea.ac.uk

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**From:** [Stephen H Schneider](#)  
**To:** [Paul Gross](#)  
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**Subject:** Civility versus the Top Ten List of denialist misconduct  
**Date:** Tuesday, April 13, 2010 4:28:49 AM

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Of course you are right Paul, civility is the best policy for progress between science and civil society--would that it were so in the real world these days! I wish you'd share your thoughtful and civil skeptics with us--I love open and honest debates--wish it happened more than ten percent of the time for me these days, if that. Mark wants ugly war stories? Let me just report then that when a recent law enforcement agency asked me to send my recent collection of really ugly hate emails--that took several files--they were bounced back by the spam detector of that agency as containing "too many expletives". Had to get around the filters to get the officers what they wanted. That is my experience most of the time--not civility and honest dissent with legitimate arguments, but deliberate distortion, hostility, ignorance, ideology, xenophobia, special interest pandering, and deep fear and anger. Indeed, civility would be such a nice thing to return to--like it was in the 1970s, even in congress or the Nixon White House, when we could have a civil dialogue on climate change, with lots of disagreements, with all parties and senators and members from all districts, including coal districts, having a real set of discussions and no ad hominem--I tell several such stories in Science as a Contact Sport. It really happened! Now--just try it. ....Try to have an intelligent, let alone civil, dialogue with Inhofe or Sensenbrenner or Barton or Palin or Beck or Limbaugh or Monckton or George Will or Rohrbacher or the Superfreaks...Wish it were so.

So yes, we should all keep looking for civil discourse, it is the only way we'll get science back into the right place for our unwritten social contract with societal decision makers: to give them what they need from us--expert risk assessment--so they can do their job for which they were elected--normative risk management. But these days that is so broken by special interest campaign contributions, false media "balance", lies and spin, that I am fearful our social contract is past the Humpty Dumpty stage. But we all should keep trying, please, like Paul pleads, what other reasonable choice is there if civil dialogue and rational discourse is to become the rule again. Cheers anyway, Steve

Stephen H. Schneider  
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----- Original Message -----

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Sent: Monday, April 12, 2010 3:19:01 AM GMT -08:00 US/Canada Pacific  
Subject: RE: Top Ten List of denialist misconduct

Mark,

Only have a second here...I'm working our morning newscast today and sending this during a commercial. As I've said in the past, we really need to keep the topics civil, succinct, and mature. Some of your points are very inflammatory, and will only serve to fuel the flames. I gave a talk about this subject just a couple of weeks ago and, despite there being some conservatives in the audience, there wasn't a single negative comment or question. There's no question that a combination of my being highly respected here in town plus my taking each skeptics' point one-by-one and calmly proving them wrong with undebateable science significantly impacted my audience.

Be careful about slinging mud...you know what happens when "it" hits the fan. Please try to tone things down and not be so accusatory.

Paul

-----Original Message-----

From: Boslough [<mailto:mbeb@unm.edu>]

Sent: Sun 4/11/2010 11:45 PM

To: Ben Santer

Cc: Boslough, Mark B; Stephen H Schneider; trenbert@ucar.edu; Thomas Crowley; Dr. Krishna AchutaRao; Myles Allen; Natalia Andronova; Tim C Atkinson; Rick Anthes; Caspar Ammann; David C. Bader; Tim Barnett; Eric Barron; Graham 'Bench; Pat Berge; George Boer; Celine J. W. Bonfils; James A. 'Bono; James Boyle; Ray Bradley; Robin Bravender; Keith Briffa; Wolfgang Brueggemann; Lisa Butler; Ken Caldeira; Peter Caldwell; Dan Cayan; Peter U. Clark; Amy Clement; Nancy Cole; William Collins; Tina Conrad; Curtis Covey; birte dar; Davies Trevor Prof; Jay Davis; Tomas Diaz De La Rubia; Andrew Dessler; Michael 'Dettinger; Phil Duffy; Paul J. 'Ehlenbach; Kerry Emanuel; James Estes; Veronika 'Eyring; David Fahey; Chris Field; Peter Foukal; Melissa Free; Julio Friedmann; Bill Fulkerson; Inez Fung; Jeff Garberson; PETER GENT; Nathan Gillett; peter gleckler; Bill Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold Haimberger; Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy Hassol; Gabi Hegerl; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr. Elisabeth A. Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell; Ken Jackson; c jakob; Gardar Johannesson; Philip D. Jones; Helen Kang; Thomas R Karl; David Karoly; Jeffrey Kiehl; Steve Klein; Knutti Reto; John Lanzante; wily@ucar.edu; Ron Lehman; John Lewis; Steven A. 'Lloyd (GSFC-610.2)[R S INFORMATION SYSTEMS INC]; Jane Long; Janice Lough; mann; emaurer@scu.edu; Linda Mearns; carl mearns; Jerry Meehl; Jerry Melillo; George Miller; Norman Miller; Art Mirin; John FB 'Mitchell; Phil Mote; Neville Nicholls; Gerald R. North; Astrid E.J. Ogilvie; Stephanie Ohshita; Tim Osborn; Stu 'Ostro; j palutikof; Joyce Penner; Thomas C Peterson; Tom Phillips; David Pierce; plattner@ipcc.unibe.ch; V. Ramaswamy; Veerabhadran 'Ramanathan; Sarah Raper; Phil Rasch; Kathryn Rauhut; Doug Rotman; Terry L. Root; Robert 'Sausen, DLR'; jsanter; John Schellnhuber; David Schimel; Michael Schlesinger; Gavin Schmidt; Christina L. Schomer; Lynda Seaver; Dian J. Seidel; Ted Sheppard; s sherwood; Adrian Simmons; socci anthony; brian soden; Susan Solomon; Ken Sperber; Anne Stark; Thomas Stocker; Ronald J Stouffer; tswetnam@ltrr.arizona.edu; Karl Taylor; claudia tebaldi; Joao P 'Teixeira; Simon Tett; Thomas A. 'Tombrello; David Thompson; Lonnie Thompson; ELLEN THOMPSON; Peter 'Thorne; Mike Wallace; Bud Ward; David 'Warrilow (GA); Warren Washington; Andrew Weaver; Michael Wehner; Frank Wentz; Penny 'Whetton; Dean N. Williams; Gordon Yano; Francis W. Zwiers; Erik M 'Conway; Sanjay Khanna; Graham Cogley; Jeffrey Kargel; W. Crawford Elliott; John Weyant; Anthony Janetos; Alison 'Sowden; Vernon Squire; Eric Garen; Peter Cross; Charles Zeller; Ian Murdock; Victoria A Arroyo; Rashida Leonard; Stephanie Fontenoy; John Collee; Sarah-jane Potts; Greg Dutton; Richard B. Rood; Brien Seeley; Mark Seeley; Oliver Morton; Cheryl\_H; Richard 'Somerville; Martin Heimann; Don Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies; Pete Myers; Michael Oppenheimer; Tom Wigley; Naomi Oreskes

Subject: Re: Top Ten List of denialist misconduct

Thanks everybody, for your responses to my request for ideas for a Top Ten List. I'm giving my presentation this week and--like you--I have a day job that takes most of my time so I haven't spent as much time on this as I would have liked. My tentative Top Ten List (of denialist mistakes, misrepresentation, misinformation, and misconduct) is attached. I could use a little help with number two "Bully-gate: Threats of physical violence and other retaliation against scientists". If anyone would like to share a particularly nasty email message you've gotten, I'd be happy to show it as an example.

I had some very good suggestions for the Top Ten List, but I excluded the ones that were technical in nature. This list is intended to appeal to a non-technical audience, and is intended to appeal to the gut, the heart, and the sense of fair play that most people have. I have until Wednesday so I might tweak the list between now and then. The main point I want to make with this list is the incredible double-standard applied by the media. If a climate scientist had ever done anything close to anything on this list, it would have been front page news. Denialists get a free

pass every time.

Regards,

Mark

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10. Climategate-gate: Theft of email messages from working scientists.
9. Bully-gate: Threats of physical violence and other retaliation against researchers.
8. Fool-gate: Denialist blogger falls for fake news story, fails to print a retraction.
7. Ghoul-gate: Readers of fake story celebrate the supposed death of "Prof. Schmidt".
6. Chicken-gate: Big talk, empty claims, and cowardly unwillingness to risk money.
5. Chicken-and-egg-gate: Pretending CO2 can't cause warming if temperature leads CO2.
4. Imperson-gate: Non-scientists impersonating scientists and inflating their credentials.
3. 1998-gate: Claiming that its been cooling since 1998.
2. Fabri-gate: Pathological relabeling, removing, and making up of data
1. Regurgi-gate: Plagiarism in the Wegman report, the "denialist Bible".

**From:** [Paul Gross](#)  
**To:** [Boslough](#); [Ben Santer](#)  
**Cc:** [Boslough](#), [Mark B](#); [Stephen H Schneider](#); [trenbert@ucar.edu](#); [Thomas Crowley](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham](#) "Bench"; [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A.](#) "Bono"; [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Michael](#) "Dettinger"; [Phil Duffy](#); [Paul J.](#) "Ehlenbach"; [Kerry Emanuel](#); [James Estes](#); [Veronika](#) "Eyring"; [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENTI](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c jakob](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Steven A.](#) "Lloyd (GSFC-610.2) [R S INFORMATION SYSTEMS INC]"; [Jane Long](#); [Janice Lough](#); [mann](#); [emaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [John FB](#) "Mitchell"; [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Stu](#) "Ostro"; [j palutikof](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Veerabhadran](#) "Ramanathan"; [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Robert](#) "Sausen, DLR"; [jsanter](#); [John Schellnhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s sherwood](#); [Adrian Simmons](#); [succi anthony](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Joao P](#) "Teixeira"; [Simon Tett](#); [Thomas A.](#) "Tombrello"; [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Peter](#) "Thorne"; [Mike Wallace](#); [Bud Ward](#); [David](#) "Warrilow (GA)"; [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Penny](#) "Whetton"; [Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Erik M](#) "Conway"; [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Alison](#) "Sowden"; [Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Ian Murdoch](#); [Victoria A Aroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard](#) "Somerville"; [Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#); [Tom Wigley](#); [Naomi Oreskes](#)  
**Subject:** RE: Top Ten List of denialist misconduct  
**Date:** Monday, April 12, 2010 5:20:04 AM

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Mark,

Only have a second here...I'm working our morning newscast today and sending this during a commercial. As I've said in the past, we really need to keep the topics civil, succinct, and mature. Some of your points are very inflammatory, and will only serve to fuel the flames. I gave a talk about this subject just a couple of weeks ago and, despite there being some conservatives in the audience, there wasn't a single negative comment or question. There's no question that a combination of my being highly respected here in town plus my taking each skeptics' point one-by-one and calmly proving them wrong with undebateable science significantly impacted my audience.

Be careful about slinging mud...you know what happens when "it" hits the fan. Please try to tone things down and not be so accusatory.

Paul

-----Original Message-----

From: [Boslough](#) [<mailto:mbeb@unm.edu>]

Sent: Sun 4/11/2010 11:45 PM

To: [Ben Santer](#)

Cc: [Boslough](#), [Mark B](#); [Stephen H Schneider](#); [trenbert@ucar.edu](#); [Thomas Crowley](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham](#) "Bench"; [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A.](#) "Bono"; [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Michael](#) "Dettinger"; [Phil Duffy](#); [Paul J.](#) "Ehlenbach"; [Kerry Emanuel](#); [James Estes](#); [Veronika](#) "Eyring"; [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#);

Julio Friedmann; Bill Fulkerson; Inez Fung; Jeff Garberson; PETER GENT; Nathan Gillett; peter gleckler; Bill Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold Haimberger; Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy Hassol; Gabi Hegerl; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr. Elisabeth A. Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell; Ken Jackson; c jakob; Gardar Johannesson; Philip D. Jones; Helen Kang; Thomas R Karl; David Karoly; Jeffrey Kiehl; Steve Klein; Knutti Reto; John Lanzante; wily@ucar.edu; Ron Lehman; John Lewis; Steven A. 'Lloyd (GSFC-610.2)[R S INFORMATION SYSTEMS INC]'; Jane Long; Janice Lough; mann; emaurer@scu.edu; Linda Mearns; carl mearns; Jerry Meehl; Jerry Melillo; George Miller; Norman Miller; Art Mirin; John FB' 'Mitchell; Phil Mote; Neville Nicholls; Gerald R. North; Astrid E.J. Ogilvie; Stephanie Ohshita; Tim Osborn; Stu' 'Ostro; j palutikof; Joyce Penner; Thomas C Peterson; Tom Phillips; David Pierce; plattner@ipcc.unibe.ch; V. Ramaswamy; Veerabhadran' 'Ramanathan; Sarah Raper; Phil Rasch; Kathryn Rauhut; Doug Rotman; Terry L. Root; Robert 'Sausen, DLR'; jsanter; John Schellnhuber; David Schimel; Michael Schlesinger; Gavin Schmidt; Christina L. Schomer; Lynda Seaver; Dian J. Seidel; Ted Sheppard; s sherwood; Adrian Simmons; socci anthony; brian soden; Susan Solomon; Ken Sperber; Anne Stark; Thomas Stocker; Ronald J Stouffer; tswetnam@ltrr.arizona.edu; Karl Taylor; claudia tebaldi; Joao P' 'Teixeira; Simon Tett; Thomas A.' 'Tombrello; David Thompson; Lonnie Thompson; ELLEN THOMPSON; Peter' 'Thorne; Mike Wallace; Bud Ward; David 'Warrilow (GA)'; Warren Washington; Andrew Weaver; Michael Wehner; Frank Wentz; Penny' 'Whetton; Dean N. Williams; Gordon Yano; Francis W. Zwiers; Erik M' 'Conway; Sanjay Khanna; Graham Cogley; Jeffrey Kargel; W. Crawford Elliott; John Weyant; Anthony Janetos; Alison' 'Sowden; Vernon Squire; Eric Garen; Peter Cross; Charles Zeller; Ian Murdock; Victoria A Arroyo; Rashida Leonard; Stephanie Fontenoy; John Collee; Sarah-jane Potts; Greg Dutton; Richard B. Rood; Brien Seeley; Mark Seeley; Oliver Morton; Cheryl\_H; Richard' 'Somerville; Martin Heimann; Don Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies; Pete Myers; Michael Oppenheimer; Tom Wigley; Naomi Oreskes  
Subject: Re: Top Ten List of denialist misconduct

Thanks everybody, for your responses to my request for ideas for a Top Ten List. I'm giving my presentation this week and--like you--I have a day job that takes most of my time so I haven't spent as much time on this as I would have liked. My tentative Top Ten List (of denialist mistakes, misrepresentation, misinformation, and misconduct) is attached. I could use a little help with number two "Bully-gate: Threats of physical violence and other retaliation against scientists". If anyone would like to share a particularly nasty email message you've gotten, I'd be happy to show it as an example.

I had some very good suggestions for the Top Ten List, but I excluded the ones that were technical in nature. This list is intended to appeal to a non-technical audience, and is intended to appeal to the gut, the heart, and the sense of fair play that most people have. I have until Wednesday so I might tweak the list between now and then. The main point I want to make with this list is the incredible double-standard applied by the media. If a climate scientist had ever done anything close to anything on this list, it would have been front page news. Denialists get a free pass every time.

Regards,

Mark

--

10. Climategate-gate: Theft of email messages from working scientists.
9. Bully-gate: Threats of physical violence and other retaliation against researchers.
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3. 1998-gate: Claiming that its been cooling since 1998.
2. Fabri-gate: Pathological relabeling, removing, and making up of data
1. Regurgi-gate: Plagiarism in the Wegman report, the "denialist Bible".

**From:** [Boslough](#)  
**To:** [Ben Santer](#)  
**Cc:** [Boslough](#), [Mark B](#); [Stephen H Schneider](#); [trenbert@ucar.edu](#); [Thomas Crowley](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham](#) "Bench"; [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A.](#) "Bono"; [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Michael](#) "Dettinger"; [Phil Duffy](#); [Paul J.](#) "Ehlenbach"; [Kerry Emanuel](#); [James Estes](#); [Veronika](#) "Eyring"; [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Heugut](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c jakob](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Steven A.](#) "Lloyd (GSFC-610.2)[R S INFORMATION SYSTEMS INC]"; [Jane Long](#); [Janice Lough](#); [mann](#); [emaurel@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [John FB](#) "Mitchell"; [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Stu](#) "Ostro"; [j.palutikof](#); [Joyce Penner](#); [Thomas C. Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Veerabhadran](#) "Ramanathan"; [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Robert "Sausen, DLR"](#); [jsanter](#); [John SchellInhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s sherwood](#); [Adrian Simmons](#); [soggi anthony](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Joao P](#) "Teixeira"; [Simon Tett](#); [Thomas A.](#) "Tombrello"; [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Peter](#) "Thorne"; [Mike Wallace](#); [Bud Ward](#); [David "Warrilow \(GA\)"](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Penny](#) "Whetton"; [Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Erik M](#) "Conway"; [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Alison](#) "Sowden"; [Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard](#) "Somerville"; [Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#); [Tom Wigley](#); [Naomi Oreskes](#)  
**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Sunday, April 11, 2010 10:45:54 PM

---

Thanks everybody, for your responses to my request for ideas for a Top Ten List. I'm giving my presentation this week and--like you--I have a day job that takes most of my time so I haven't spent as much time on this as I would have liked. My tentative Top Ten List (of denialist mistakes, misrepresentation, misinformation, and misconduct) is attached. I could use a little help with number two "Bully-gate: Threats of physical violence and other retaliation against scientists". If anyone would like to share a particularly nasty email message you've gotten, I'd be happy to show it as an example.

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Regards,

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1. Regurgi-gate: Plagiarism in the Wegman report, the "denialist Bible".

**From:** [John Nielsen-Gammon](#)  
**To:** [Andrew Dessler](#)  
**Subject:** cv  
**Date:** Thursday, April 01, 2010 3:49:31 PM  
**Attachments:** [NGcurrent.doc](#)  
[Untitled attachment 67118.htm](#)

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Andy -

While I'm at it, here's my up-to-the-minute CV. Thanks!

- John

## **CURRICULUM VITAE**

### **JOHN WILLIAM NIELSEN-GAMMON**

Professor of Meteorology and Texas State Climatologist  
Department of Atmospheric Sciences  
Texas A&M University

3150 TAMU, College Station, TX 77843-3150  
Eller O&M Building, Room 1012A  
n-g@tamu.edu      979-862-2248

*last updated March 12, 2010*

#### **POSITIONS HELD**

Professor of Meteorology, Texas A&M University, 2000-present  
Texas State Climatologist, 2000-present  
Acting Executive Associate Dean and Associate Dean for Research, College of Geosciences,  
Texas A&M University, 2008-2009  
Associate Director, The Center for Atmospheric Chemistry and the Environment, 2003-07  
Deputy Speaker, Texas A&M Faculty Senate, 1997-98  
Associate Professor of Meteorology, Texas A&M University, 1996-00  
Assistant Professor of Meteorology, Texas A&M University, 1991-96  
Postdoctoral Research Associate, State University of New York at Albany, 1990-91

#### **PROFESSIONAL INTERESTS**

Synoptic-scale dynamic meteorology and weather prediction  
Air pollution meteorology  
Mesoscale meteorology  
Applied climatology

#### **EDUCATION**

- Ph.D. Massachusetts Institute of Technology, Meteorology, 1990  
• Dissertation title: Small-scale Cyclogenesis During the Genesis of Atlantic  
Lows Experiment
- S.M. Massachusetts Institute of Technology, Meteorology, 1987  
• Thesis title: The Formation of New England Coastal Fronts
- S.B. Massachusetts Institute of Technology, Earth and Planetary Sciences, 1984

## **AWARDS AND HONORS**

Certificate of Recognition, National Aeronautics and Space Administration, 2007  
Editor's Award, American Meteorological Society, 1997  
Faculty Distinguished Achievement Award in Teaching, Texas A&M University Association of Former Students, 1996  
Presidential Faculty Fellow, National Science Foundation/White House, 1995  
Distinguished Teaching Award, College of Geosciences and Maritime Studies, Association of Former Students, 1995  
National Collegiate Weather Forecasting Contest, First Place, 1989-91

## **EXTERNAL SUPPORT**

### Under Development

### Submitted

“Response of the Urban Heat Island in North-Central Texas to Climate Change”, 18 months, \$140,000, Norman Hackerman Advanced Research Program, A. Winguth, UT Arlington, P.I.  
“Climatological Factors Governing The Cyclical Population Dynamics Of Gulf Coast Ticks In The Southern Plains”, 24 months, \$120,000, United States Department of Agriculture, P. Teel, P.I., RF# 10-0652.

### Pending

### Current

“Analysis of Historical Drought Stress in the Big Bend Region”, October 2009, 9 months, \$23,000, subcontract from the World Wildlife Fund (project funded by NOAA).  
“Urban-Scale Meteorological Modeling for the Corpus Christi Area”, September 2008, 48 months, \$400,000, subcontract from the University of Texas.  
“Boundary Layer Parameterization Improvement”, May 2007, 3 years, \$47,000, Environmental Protection Agency (through the University of Houston), RF 497251-03001.

### Previous

“Validation and Improvement of Vertical Mixing and Surface Fluxes”, June 2008, 15 months, \$160,000, Texas Environmental Research Consortium, H-96-2008-TAMU.  
“Sources and Trends of Background Ozone”, June 2008, 13 months, \$40,000, Texas Environmental Research Consortium, H-107-2008-TAMU.  
“Ensemble Kalman Filter (EnKF) Implementation and Testing In Support of Air Quality Modeling”, April 2008, 16 months, \$185,000, Texas Commission on Environmental Quality. 582-5-64593-FY08-24.

- “Climate Change, Drought and Policymaking in the U.S. Southern Region”, September 2005, 3 years, \$800,000, National Oceanic and Atmospheric Administration, NA05OAR4311121, A. Vedlitz, P.I.
- “Analysis of TexAQS II Meteorological Data”, May 2007, 11 months, \$212,000, Texas Commission on Environmental Quality, 582-5-64593-FY07-20.
- “Development of Databases and Characterization of Meteorological Conditions for the TexAQS II Intensive Period”, April 2007, 8 months, \$75,000, Texas Environmental Research Consortium, H-84-2007-TAMU.
- “Meteorological Modeling Technical Oversight and Peer Review”, May 2007, 4 months, \$30,000, Texas Commission on Environmental Quality, 582-5-64593-FY07-21.
- “Operation of a Suite of Meteorological Instruments at the Brazos A19 Offshore Oil Platform and Data Validation”, April 2006, 12 months, \$258,000, Texas Commission on Environmental Quality, 582-5-61593-FY06-19.
- “Mixing Heights in Southeast Texas”, January 2006, 24 months, \$17,000, Texas Air Research Center, 057TAM3039A.
- “Drought Monitoring Index for Texas”, October 2005, 1.3 years, \$99,000, Texas Water Development Board, 2005-483-028, S. Quiring, P.I.
- “Digital Climatic Atlas for Texas”, October 2005, 1.3 years, \$60,000, Texas Water Development Board, 2005-483-559, R. Srinivasan, P.I.
- “Real-Time Meteorological Modeling for TexAQS-II”, November 2005, 11.5 months, \$140,000, Texas Environmental Research Consortium, H-45-D-2005-TAMU.
- “A Rural Air Quality Monitoring Tower Site in East-Central Texas”, July 2005, 21 months, \$94,000, Texas Commission on Environmental Quality (P.I. until July 2006), 582-5-70807-0015.
- “Subjective Validation and Review of Upper Air Meteorological Data”, October 2005, 3 months, \$60,000, mostly subcontracted to Sonoma Technologies, Inc., Texas Commission on Environmental Quality, 582-5-64593-FY05-07.
- “Near Real-Time Mixing Height Derivation”, October 2005, 3 months, \$27,000, mostly subcontracted to Sonoma Technologies, Inc., Texas Commission on Environmental Quality, 582-5-64593-FY05-06.
- “Modeling Strategy in Support of TexAQS-II and 8-Hour Ozone Assessment”, November 2004, 1.1 years, \$330,000, TERC/TCEQ, H-45-S-B-2004-T2.
- “Installation and Support of Radar Profiler in Central Texas”, May 2005, 7 months, \$90,000, Alamo Area Council of Governments/Capital Area Council of Governments, R08-04/05-A&M-1.
- “Acquisition of a Three Dimensional Lightning Channel Mapping Network for the Houston, Texas Area”, September 2003, 2.3 years, \$440,000, National Science Foundation, R. Orville, P.I, ATM-0321052.
- “Data Assembly and Analysis”, July 2005, 2 months, \$23,000, Texas Commission on Environmental Quality
- “Development of Joint Multi Pollutant Air Quality Modeling Facilities and Air Monitoring Stations for Houston-Galveston Metropolitan Area”, September 2002, 3 years, \$1,000,000, Environmental Protection Agency through University of Houston.
- “Summertime Mixing Heights in Southeast Texas – Year 2”, September 2004, 1 year, \$33,000, Texas Air Research Center, 064TAM2039A.
- “A Conceptual Model for 8-Hour Ozone Exceedances in East Texas”, July 2004, 5 months,

\$47,000, TERC/HARC, H-12-2005-8HRA-T1.

"Ensemble Kalman Filter, Air Pollution, and Adaptive Observations", 2003, 1 year, \$120,000, GeoTechnology Research Institute/HARC.

"Summertime Mixing Heights in Southeast Texas", October 2003, 1 year, \$35,000, Texas Air Research Center, 083TAM0039A.

"Umbrella Contract (Texas State Climatologist)", March 2003, 1.5 years, \$178,000, Texas Commission on Environmental Quality.

"Analysis and Simulation of Allison (2001) over Texas", October 2002, one year, \$8,000, University Corporation for Atmospheric Research, S03-38666.

"SMART Radar Rebuild", July 2002 (became PI in June 2003), 1.5 years, \$64,000, National Oceanographic and Atmospheric Administration.

"Umbrella Contract (MM5 Modeling of August 2000 Houston Ozone Episode and Other Tasks)", September 2001, two years, \$308,000, Texas Commission on Environmental Quality.

"Medium-Range Synoptic Meteorology", 2001, 4 years, \$388,000, National Science Foundation, ATM-0089906.

"Cooperative Research Applied to NWS Southern Region Needs and Priorities", 2001, 3.3 years, \$358,000, National Weather Service. R. Orville, PI, NA17WA1011.

"The Interaction of the Sea Breeze and the Urban Heat Island", 2000, 20 months, \$56,000, Texas Air Research Center.

"Presidential Faculty Fellow", 1995, six years, \$500,000, National Science Foundation, ATM-9553284.

"Fog Forecasting Using a One-Dimensional Model", 2000, one year, \$10,000, University Corporation for Atmospheric Research / Cooperative Program for Operational Meteorology, Education and Training, S01-24238.

"Meteorological Data Postanalysis for TexAQS-2000", June 2001, three months, \$71,000, Texas Natural Resource Conservation Commission.

"Weather Forecasting and Balloon Launches in Support of TexAQS-2000, 2000, one year, \$59,000, Texas Natural Resource Conservation Commission.

"Mesoscale Modeling and Trajectories" (P.I.: G. L. Sickler), 1998, one year, \$135,000, Texas Natural Resource Conservation Commission.

"The Dynamics of Upper-Level Mobile Troughs", 1996, four years, \$207,000, National Science Foundation, ATM-9521383.

"Interagency Cooperative Contract" (P.I.: E. J. Zipser), 1994, one year, \$125,000, Texas Natural Resource Conservation Commission.

"Interagency Cooperative Contract" (P.I.: E. J. Zipser), 1994, four months, \$47,000, Texas Natural Resource Conservation Commission.

"Subject Matter Expert - Extratropical Cyclones", 1993, one year, \$11,000, Cooperative Program for Operational Meteorology, Education and Training.

"Undergraduate Laboratory for Exploration of the Atmosphere" (with Dr. M. I. Biggerstaff), 1993, one year, \$60,000, National Science Foundation, DUE-9352601.

"Subject Matter Expert - Extratropical Cyclones", 1993, four months, \$11,000, Cooperative Program for Operational Meteorology, Education and Training.

"The Potential Vorticity Dynamics of Upper-Level Short Waves", 1993, two years, \$142,000, National Science Foundation, ATM-9218316.

"The Left-Moving Thunderstorms of May 26-27, 1992", 1992, one year and three months,

\$4,000, Cooperative Program for Operational Meteorology, Education and Training, S9315.

## **INTERNAL COMPETITIVE SUPPORT**

“METR151 Web Module Development”, 1998, one year, \$3,000, Academy for Advanced Telecommunications and Learning Technologies

## **PROFESSIONAL AND SERVICE ACTIVITIES (leadership activities in boldface)**

### *Department of Atmospheric Sciences*

Promotion and Tenure Committee, Member, 1996-present

**Chair, 2003-05; 2008-09; 2010-present**

Undergraduate Advisor, 1995-present

Shared Mobile Atmospheric Research and Teaching Radar Steering Committee, 2008-present

Weather Analysis and Forecasting Faculty Search Committee, 2008

Teaching Committee, 2007

**Radar/Mesoscale Faculty Search Committee, Chair, 2007-2008**

Graduate Committee, Member, 2005-2007

Web Page Committee, Member, 2005-2007

Budget Committee, Member, 2004-2006

Faculty Search Committee, Member, 2005-2006

Undergraduate Program Committee, Member, 2001-05

Vice-chair, 2002-03

**Chair, 2003-05**

Mentor, 2005-07

Executive Committee, Cooperative Institute for Applied Meteorological Studies, Member, 1995-2005

Climate Faculty Search Committee, Member, 2003-04

Atmospheric Chemistry Faculty Search Committee, Member, 2003-04

Radar Faculty Search Committee, Member, 2002-03

Facilities Committee, Member, 1998-03

**Synoptic/Mesoscale Faculty Search Committee, Chair, 1999-01**

TAMU Rewarding Teaching Project, Departmental Team Member, 1999-01

Graduate Program Committee, Member, 1995-98

Ad Hoc Peer Teaching Evaluation Committee, Member, 1993-96

**Chair, 1993-96**

Data Resources Committee, Member 1993-95

**Chair, 1993-95**

Radar Committee, Member, 1992-95

Undergraduate Curriculum Committee, Member, 1992-95

Computer Committee, Member, 1992-95

College of Geosciences

College Advisory Committee on Promotion and Tenure

- Member, 2000-02, 2009-present
- **Chair, 2001-02**

**Environmental Studies Program, Water Focus Working Group, Chair, 2008**

GeoConnections Committee, 2006-07

Research Council, Member, 2004-06

Oceans and Atmospheres Reinvestment Committee, Member, 2003-06

Climate Geographer Faculty Search Committee, 2004-05

College Curriculum Committee, Member, 2003-05

Search Committee for Faculty Position in Physical Oceanography, Member, 1999-00

Faculty Workshop, "Putting Your Course Online" (joint with B. Herbert and S. Bednarz),  
1998

College of Geosciences and Maritime Studies Dean Search Committee, Member, 1997

Meteorology Department Head Search Committee, Member, 1995

Texas A&M University

Student Research Week Competition, Judge, 1997-2008, 2010-present

Responsible Conduct in Research Working Group, 2010

University Research Committee, 2008-09

Illegal Discrimination Appeals Panel, 2008-present

Association of Former Students Distinguished Achievement Awards Selection Committee,  
Member, 1997, 2006

Presidential Professor for Teaching Excellence Selection Committee, Member, 2003

TAES/TCE Statewide Evapotranspiration Network Technical Committee, Member, 2002

Core Curriculum Oversight Subcommittee, Member, 1997-01

Letters, Arts, and Sciences Task Force, Member, 2000-01

Ad Hoc Committee on Reconciling the Faculty Reward System with the Multiple Missions of  
Texas A&M University, Member, 1997-00

- **Co-Chair, 1998-00**

- Cross-College Inventory and Comparison Subcommittee, Member, 1997-98

- **Chair, 1997-98**

GIS Laboratory Committee, Member, 1999

Life Sciences Task Force

- Integrative Biology and Environmental Health Committee, Member, 1999

System Employee Benefits Advisory Committee Election Committee, Member, 1999

Faculty Senate, Elected Member, 1995-99

- **Deputy Speaker, 1997-98**

- **Executive Committee, Member, 1997-98**

- Ad Hoc Subcommittee for Revisions to the Statement on Academic  
Freedom, Responsibility, and Tenure, Member, 2000-01

- Ad Hoc Subcommittee to Examine the Statewide Core Curriculum, Member, 1998-99
- Staff Assistant Search Committee, Member, 1998
- Student Senate Liaison, 1997-98
- Texas Council of Faculty Senates, Representative, 1998-98
- Bylaws Committee, Member, 1998-99
- Faculty Senate Election Committee, Member, 1996-98
- Personnel and Welfare Committee, Member, 1995-99
  - **Chair, 1998-99**
  - Research Faculty Subcommittee, Member, 1998-99
  - Ad Hoc Post Tenure Review Committee, Member, 1996
  - Parking and Transit Subcommittee, Member, 1995-97
    - **Chair, 1995-97**
  - Bicycle Issues Subcommittee, Member, 1996-97
    - **Chair, 1996-97**

Residence Hall Check-In Coordination Committee, Member, 1995-99

APC Committee to Study the Use of Personnel, Equipment, and Resources by Faculty in their Consulting/Outside Employment Arrangements, Member, 1998

Faculty Work-Life Satisfaction Survey Focus Group, Member, 1998

Vision 2020 Task Force

- Committee on Leadership, Governance, and Organization, Member, 1998

Academic Convocation Planning Committee, Member, 1997-98

**Science, Technology, and Youth Symposium, session leader, 1995-97**

### External and Scientific

International Association of Meteorology and Atmospheric Sciences (IAMAS)

- International Commission for Dynamical Meteorology, Member, 2000-present
  - **President, 2007-present**
  - **Secretary, 2003-2007**

American Meteorological Society (AMS), Member, 1989-present

- Education and Human Resources Commission, Member, 2008-present
- Board on Higher Education, Member, 2006-present
  - **Chair, 2008-present**
  - **Program Co-Chair, 2008 AMS Student Symposium**
  - **Program Co-Chair, 2007 AMS Student Symposium**
- AMS/Industry Minority Scholarships Selection Committee
  - Member, 2008-present
  - **Chair, 2010**
- **AMS/AGU Heads & Chairs Meeting, co-convenor, 2008 and 2010**
- **Drafting Committee, AMS Statement on the Bachelor's Degree in Atmospheric Sciences, Chair, 2010**
- Committee on Mesoscale Processes, Member, 1998-01

American Geophysical Union (AGU), Member, 2001-present

- **Co-Convenor, 2007 Fall Meeting Session A35, Transport and Mixing**

## **Affecting Air Quality in Coastal and Complex Terrain Urban Areas**

### American Association of State Climatologists

- Member, Climate Curriculum Committee, 2010
- Member, Dissertation Award Selection Committee, 2009
- Member, Nominating Committee, 2007
- **AASC-Recognized State Climate Office, Director, 2002-present**

### National Academy of Sciences

- Committee Member, Review Panel for NOAA Climate Change Science Program Scientific Assessment Product 1.3: Reanalysis and Attribution, 2007-08
- Consultant, Panel on Coastal Meteorology, 1991

### National Science Foundation

- Member, Observing Facilities Advisory Panel, 2000-02

### USACE/FEMA Joint Texas Coastal Surge Project

- Member, Independent Technical Review Panel, 2007-present

### University of California Davis/Lawrence Livermore National Laboratory Point-of-Care Technologies Center

- Member, Meteorological Board, 2009-present

### Cooperative Program for Operational Meteorology, Education and Training

- Fall COMAP Course, Guest Lecturer, 1995
- Subject Matter Expert, Distance Learning Program, 1993-95

### Unidata Program, University Corporation for Atmospheric Research

- Member, Unidata Policy Committee, 1991-94
- Member, Unidata Implementation Working Group 1991-93

### Georgia Institute of Technology

- External Review Team, School of Earth and Atmospheric Sciences, 2009

### National Meteorological Center Surface Analysis Workshop, 1991

### Genesis of Atlantic Lows Experiment, Lead Forecaster, Ground Mission Scientist, Airborne Mission Scientist, 1986

### Associate Editor, Monthly Weather Review, 1994-98; 2000-02

### **Chapter Editor, Handbook of Weather, Climate, and Water, 1999-03**

### Texas Environmental Research Consortium

- Member, Research Teams Committee, 2004-present
- Member, Science Advisory Committee, 2004

### Texas Commission for Environmental Quality

- Member, TexAQS-II Coordination Committee, 2004-2006
- Member, Science Coordinating Committee, 2001-2008
- Member, Science Executive Committee, 2001-2008
- **Chair, Meteorological Modeling Working Group, 2001-2008**

### Texas Drought Preparedness Council, Member, 2001-present

### TexAQS-2 Field Program

- Member, Science Planning Team, 2004-06
- **Chair, Meteorological Processes Committee, 2004-06**
- **Lead Forecaster, 2005-06**

### TexAQS 2000 Field Program

- Member, Science Planning Team, 1999-00

- **Co-Chair, Boundary Layer Processes Committee, 1999-01**
- **Lead Forecaster, 2000**

Cooperative Institute for Applied Meteorological Studies

- Spring Doppler Programs, Mission Scientist, Radar Operator, Sounding Chief, 1992, 1993

49th International Science and Engineering Fair, Grand Awards Judge, 1998

**Texas and Florida Underflights Experiment, Lead Forecaster, 1998**

**Genesis of Atlantic Lows Experiment, Lead Forecaster, 1986**

Reviewer of grant applications for the following agencies:

National Science Foundation, Department of Defense, National Oceanographic and Atmospheric Administration, US Civilian Research and Development Foundation, Natural Environment Research Council (UK), Israel Science Foundation, Canadian Foundation for Climate and Atmospheric Sciences, Georgia National Science Foundation

Reviewer of articles in the following journals:

Atmospheric Environment, Bulletin of the American Meteorological Society, Continental Shelf Research, Electronic Journal of Operational Meteorology, Environmental Modeling and Software, Environmental Science and Technology, GeoJournal, International Journal of Climatology, Journal of Applied Meteorology and Climatology, Journal of Atmospheric and Oceanic Technology, Journal of Atmospheric and Solar-Terrestrial Physics, Journal of Climate, Journal of Earth System Science, JGR - Atmospheres, Journal of Marine Science, Journal of the Atmospheric Sciences, Journal of the Air and Waste Management Association, Journal of the Meteorological Society of Japan, Meteorologische Zeitschrift, Meteorology and Atmospheric Physics, Monthly Weather Review, National Weather Digest, Nature, Quarterly Journal of the Royal Meteorological Society, Pure and Applied Geophysics, Tellus, Texas Water Journal, Weather and Forecasting.

## **TEACHING**

### Complete Courses

ATMO/METR 151 Weather Forecasting. (0-2). Credit 1. Basic principles of meteorology as applied to short-range weather forecasting; numerical weather prediction, guidance and forecasting techniques; daily map discussions and forecasts.

*1995 (new; 2 sections), 1996 (2), 1997 (2), 1998 (4; coordinator), 2002 (2)*

ATMO/METR 201 Atmospheric Science. (3-0). Credit 3. Structure, energy, and motions of the atmosphere; climate; fronts and cyclones; atmospheric stability; clouds and precipitation; severe storms.

*2000 (honors; co-instructor), 2009(2)*

ATMO 251 Weather Observation and Analysis. (2-2). Credit 3. Standard and experimental weather observing techniques; subjective and objective analysis; application of conceptual models; simple kinematic and dynamic constraints.

- 2003 (new, 3 sections), 2004 (2), 2005(2), 2006(2)*
- ATMO 435 Synoptic-Dynamic Meteorology. (3-0). Credit 3. Dynamics and diagnosis of synoptic-scale systems; perturbation theory and baroclinic instability; wave energetic, frontogenesis. Prerequisite: ATMO 336 or equivalent.  
*2007*
- METR 451 Weather Observation and Analysis. (2-9). Credit 5. Standard and experimental weather observing techniques; structure of tropospheric phenomena and their representation on weather charts; computer technology in weather service. Prerequisite: METR 336 or registration therein.  
*1999, 2000, 2001 (co-instructor)*
- METR 452 Dynamics of Weather Processes. (2-9). Credit 5. Development of large-scale processes in the troposphere; prognostic techniques, including numerical methods. Prerequisite: METR 451.  
*1991, 1993, 1994, 1995, 1996, 1997, 1998, 1999*
- ATMO 455/489/689 Numerical Weather Prediction. (2-2). Credit 3. Basic principles of computer models of the atmosphere; parameterizations; use and critical evaluation of models and model output. Prerequisites: MATH 308; ATMO 336 or registration therein.  
*2003 (new)*
- ATMO 456/489 Practical Weather Forecasting. (1-4). Credit 3. Application of meteorological concepts to particular forecasting situations; advanced forecasting techniques.  
*2005 (new), 2006, 2008.*
- ATMO 459/659 Tropical Cyclones. (3-0). Credit 3. Tropical climatology; structure evolution and motion of tropical cyclones, tropical cyclone hazards; large scale tropical phenomena. Prerequisites: ATMO 451; junior or senior classification.  
*2003 (co-instructor)*
- ATMO/METR 485 Directed Studies. Supervision of research projects carried out by undergraduates.  
*1997 (1 student), 1999 (2), 2001 (2), 2003 (2), 2005 (5), 2006 (3)*
- METR 602 Principles of Atmospheric Physics and Chemistry. (3-0). Credit 3. Integrated treatment of fundamental aspects of physical meteorology and atmospheric chemistry; ultraviolet and infrared absorption and emission; radiative transfer; photochemistry of ozone and OH; cloud and precipitation microphysics and thermodynamics.  
*1993 (new), 1994*
- ATMO/METR 658 Synoptic Meteorology. (3-0). Credit 3. Mechanism and energetics of general circulation. Structure of large-scale systems.  
*1992, 1995, 2000, 2004, 2007*
- ATMO 685 Directed Studies. Offered to enable majors in meteorology to undertake and complete, with credit, in their particular fields of specialization, limited investigations not covered by any other courses in established curriculum.  
*1992 (2 students), 1993 (2), 1995 (1), 1997 (2), 1998 (2), 2000 (1), 2004 (1), 2005 (2), 2006 (1), 2007 (1)*

*Out-of-Department Guest Lectures*

## PUBLICATIONS

\*denotes graduate student co-author

### Refereed literature

43. Hu, X.-M., F. Zhang, and **J. W. Nielsen-Gammon**, 2010: Ensemble-based simultaneous state and parameter estimation for treatment of mesoscale model error: A real-data study. *Geophys. Res. Lett.*, accepted, doi:10.1029/2010GL043017.
42. \*Myoung, B., and **J. W. Nielsen-Gammon**, 2010: Sensitivity of monthly convective precipitation to environmental conditions. *J. Climate*, 23, 166-188.
41. **Nielsen-Gammon, J. W.**, L. B. Avilés, and E. Joseph, 2009: What does it take to get into graduate school? A survey of atmospheric science programs. *Bull. Amer. Meteor. Soc.*, 90, 1698-1705.
40. Parrish, D. D., D. T. Allen, T. S. Bates, M. Estes, F. C. Fehsenfeld, G. Feingold, R. Ferrare, R. M. Hardesty, J. F. Meagher, **J. W. Nielsen-Gammon**, R. B. Pierce, T. B. Ryerson, J. H. Seinfeld, M. Trainer, and E. J. Williams, 2009: Overview of the Second Texas Air Quality Study (TexAQS II) and the Gulf of Mexico Atmospheric Composition and Climate Study (GoMACCS). *J. Geophys. Res.*, 114, D00F13, doi:10.1029/2009JD011842.
39. Pielke Sr., R., C. Davey, D. Niyogi, S. Fall, J. Steinweg-Woods, K. Hubbard, X. Lin, M. Cai, Y.-K. Lim, H. Li, **J. Nielsen-Gammon**, K. Gallo, R. Hale, J. Angel, R. Mahmood, S. Foster, R. T. McNider, and P. Blanken, 2009: Reply to comment by David E. Parker et al. on "Unresolved issues with the assessment of multidecadal global land surface temperature trends". *J. Geophys. Res.*, 114, D05105, doi:10.1029/2008JD010938.
38. \*Gold, D. A., and **J. W. Nielsen-Gammon**, 2008: Potential vorticity diagnosis of the severe convective regime. Part IV: Comparison with numerical simulations of the 1999 Oklahoma outbreak. *Mon. Wea. Rev.*, 136, 1612-1629.
37. \*Gold, D. A., and **J. W. Nielsen-Gammon**, 2008: Potential vorticity diagnosis of the severe convective regime. Part III: The Hesston tornado outbreak. *Mon. Wea. Rev.*, 136, 1593-1611.
36. **Nielsen-Gammon, J. W.**, and \*D. A. Gold, 2008: Potential vorticity diagnosis of the severe convective regime. Part II: The impact of idealized anomalies. *Mon. Wea. Rev.*, 136, 1582-1592.
35. \*Gold, D. A., and **J. W. Nielsen-Gammon**, 2008: Potential vorticity diagnosis of the severe convective regime. Part I: Methodology. *Mon. Wea. Rev.*, 136, 1565-1581.
34. **Nielsen-Gammon, J. W.**, \*C. L. Powell, M. J. Mahoney, W. Angevine, C. Senff, A. White, C. Berkowitz, C. Doran, and K. Knupp, 2008: Multi-sensor estimation of mixing heights over a coastal city. *J. Appl. Meteor. Climatol.*, 47, 27-43.
33. **Nielsen-Gammon, J. W.**, and \*D. A. Gold, 2008: Potential vorticity diagnosis in the quasigeostrophic and nonlinear balance systems. *J. Atmos. Sci.*, 65, 172-188.
32. **Nielsen-Gammon, J. W.**, 2007: *An Inconvenient Truth: The scientific argument*. *GeoJournal*, 70, 21-26, doi:10.1007/s10708-008-9126-z.

31. Pielke Sr., R., C. Davey, D. Niyogi, S. Fall, J. Steinweg-Woods, K. Hubbard, X. Lin, M. Cai, Y.-K. Lim, H. Li, **J. Nielsen-Gammon**, K. Gallo, R. Hale, J. Angel, R. Mahmood, S. Foster, R. T. McNider, and P. Blanken, 2007: Unresolved issues with the assessment of multidecadal global land surface temperature trends. *J. Geophys. Res.*, 112, D24S08, doi:10.1029/2006JD008229.
30. Pielke Sr., R., **J. Nielsen-Gammon**, C. Davey, J. Angel, O. Bliss, N. Doesken, M. Cai, S. Fall, D. Niyogi, K. Gallo, R. Hale, K. G. Hubbard, X. Lin, H. Li, and S. Raman, 2007: Documentation of uncertainties and bias associated with surface temperature measurement sites for climate change assessment. *Bull. Amer. Meteor. Soc.*, 88, 913-928, doi:10.1175/BAMS-88-6-913.
- 29. Nielsen-Gammon, J. W.**, R. T. McNider, W. M. Angevine, A. B. White, and K. Knupp, 2007: Mesoscale model performance with assimilation of wind profiler data: Sensitivity to assimilation parameters and network configuration. *J. Geophys. Res.*, 112, D09119, doi:10.1029/2006JD007633.
28. Stuart, A. L., \*A. Aksoy, F. Zhang, and **J. W. Nielsen-Gammon**, 2007: Ensemble-based data assimilation and targeted observation of a chemical tracer in a sea breeze model. *Atmos. Env.*, 41, 3082-3094.
27. Zhang, F., N. Bei, **J. W. Nielsen-Gammon**, \*G. Li, R. Zhang, A. Stuart, and \*A. Aksoy, 2007: Impacts of meteorological uncertainties on ozone pollution predictability estimated through meteorological and photochemical ensemble forecasts. *J. Geophys. Res.*, 112, D04304, doi:10.1029/2006JD007429.
26. \*Aksoy, A., F. Zhang, and **J. W. Nielsen-Gammon**, 2006: Ensemble-based simultaneous state and parameter estimation in a two-dimensional sea-breeze model. *Mon. Wea. Rev.*, 134, 2951-2970.
25. \*Aksoy, A., F. Zhang, and **J. W. Nielsen-Gammon**, 2006: Ensemble-based simultaneous state and parameter estimation with MM5. *Geophys. Res. Lett.*, 33, L12801, doi:10.1029/2006GL026186.
24. \*Sippel, J., **J. W. Nielsen-Gammon**, and S. Allen, 2006: The multiscale vortex nature of tropical cyclogenesis. *Mon. Wea. Rev.*, 134, 1796-1814.
23. Zhang, F., \*A. Odins, and **J. W. Nielsen-Gammon**, 2006: Mesoscale predictability of an extreme warm-season precipitation event. *Wea. Forecasting*, 21, 149-166.
- 22. Nielsen-Gammon, J. W.**, F. Zhang, \*A. M. Odins, and \*B. Myoung, 2005: Extreme rainfall in Texas: Patterns and predictability. *Phys. Geog.*, 26, 340-364.
21. \*Fan, J., R. Zhang, \*G. Li, **J. Nielsen-Gammon**, and Z. Li, 2005: Simulations of fine particulate matter (PM<sub>2.5</sub>) in Houston, Texas. *J. Geophys. Res.*, 110, D16203, doi:10.1029/2005JD005805.
20. \*Aksoy, A., F. Zhang, **J. W. Nielsen-Gammon**, and C. C. Epifanio, 2005: Ensemble-based data assimilation for thermally forced circulations. *J. Geophys. Res.*, 110, D16105, doi: 10.1029/2004JD005718.
19. Banta, R. M., C. J. Senff, **J. W. Nielsen-Gammon**, T. B. Ryerson, L. S. Darby, R. J. Alvarez, S. P. Sandberg, E. J. Williams, and M. Trainer, 2005: A bad air day in Houston. *Bull. Amer. Meteor. Soc.*, 86, 657-669.
18. Orville, R. E., G. Huffines, **J. Nielsen-Gammon**, R. Zhang, \*B. Ely, \*S. Steiger, \*S. Phillips, S. Allen, and W. Read, 2001: Enhancement of cloud-to-ground lightning over Houston, Texas. *Geophys. Res. Lett.*, 28, 2597-2600.
- 17. Nielsen-Gammon, J. W.**, 2001: A visualization of the global dynamic tropopause. *Bull.*

- Amer. Meteor. Soc.*, 82, 1151-1167.
16. \*Wandishin, M. S., **J. W. Nielsen-Gammon**, and D. Keyser, 2000: A potential vorticity diagnostic approach to upper-level frontogenesis within a developing baroclinic wave. *J. Atmos. Sci.*, 57, 3918-3938.
  15. **Nielsen-Gammon, J. W.**, and D. Keyser, 2000: Effective stratification for pseudoadiabatic ascent. *Mon. Wea. Rev.*, 128, 3007-3010.
  14. **Nielsen-Gammon, J. W.**, and D. M. Schultz, 1999: Comments on "The intensification of the low-level jet during the development of mesoscale convective systems on a mei-yu front". *Mon. Wea. Rev.*, 127, 2227-2231.
  13. \*Igau, R. C., and **J. W. Nielsen-Gammon**, 1998: Low-level jet development during a numerically simulated return flow event. *Mon. Wea. Rev.*, 126, 2972-2990.
  12. Morgan, M. C., and **J. W. Nielsen-Gammon**, 1998: Using tropopause maps to diagnose midlatitude weather systems. *Mon. Wea. Rev.*, 126, 2555-2579.
  11. **Nielsen-Gammon, J. W.**, M. I. Biggerstaff, M. E. Alcorn, D. Austin, K. P. Bowman, D. Djuric, J. Guynes, R. L. Panetta, R. White, and L. J. Wicker, 1996: Texas A&M University's Laboratory for the Exploration of Atmospheric Processes - TAMU's LEAP. *Bull. Amer. Meteor. Soc.*, 77, 2907-2918.
  10. **Nielsen-Gammon, J. W.**, and \*R. J. Lefevre, 1996: Piecewise tendency diagnosis of dynamical processes governing the development of an upper-tropospheric mobile trough. *J. Atmos. Sci.*, 53, 3120-3142.
  9. \*Livingston, E. S., **J. W. Nielsen-Gammon**, and R. E. Orville, 1996: A climatology, synoptic assessment, and thermodynamic evaluation for cloud-to-ground lightning in Georgia: A study for the 1996 Summer Olympics. *Bull. Amer. Meteor. Soc.*, 77, 1483-1495.
  8. **Nielsen-Gammon, J. W.**, 1995: Dynamic conceptual models of upper-level mobile trough formation: comparison and application. *Tellus*, 47A, 705-721.
  7. \*Lefevre, R. J., and **J. W. Nielsen-Gammon**, 1995: An objective climatology of mobile troughs in the Northern Hemisphere. *Tellus*, 47A, 638-655.
  6. **Nielsen-Gammon, J. W.**, and W. Read, 1995: Detection and interpretation of left-moving severe thunderstorms using the WSR-88D: A case study. *Wea. Forecasting*, 10, 127-140.
  5. Bosart, L. F., and **J. W. Nielsen**, 1993: Radiosonde penetration of an undilute cumulonimbus anvil. *Mon. Wea. Rev.*, 121, 1688-1702.
  4. **Nielsen, J. W.**, and R. M. Dole, 1992: A survey of extratropical cyclone characteristics during GALE. *Mon. Wea. Rev.*, 120, 1156-1167.
  3. **Nielsen, J. W.**, 1992: In situ observations of Kelvin-Helmholtz waves along a frontal inversion. *J. Atmos. Sci.*, 49, 369-386.
  2. **Nielsen, J. W.**, and P. P. Neilley, 1990: The vertical structure of New England coastal fronts. *Mon. Wea. Rev.*, 118, 1793-1807.
  1. **Nielsen, J. W.**, 1989: The formation of New England coastal fronts. *Mon. Wea. Rev.*, 117, 1380-1401.

*Books, Monographs, and Peer-Reviewed Reports*

2. National Research Council, 2008: Review of the U.S. Climate Change Science Program's Synthesis and Assessment Product 1.3: "Reanalysis of Historical Climate Data for

Key Atmospheric Features: Implications for Attribution of Causes of Observed Change". National Academy Press, Washington, D.C., in press. (Panel member)

1. National Research Council, 1992: Coastal Meteorology: A review of the state of the science, National Academy Press, Washington, D.C., 99 pp. (Panel consultant and co-author)

#### Chapters in Books

6. **Nielsen-Gammon, J. W.**, 2010: The changing climate of Texas. *The Impact of Global Warming on Texas*. G. R. North, J. Schmandt, and J. Clarkson, eds., University of Texas Press, Austin. (in press; available online at <http://www.texasclimate.org>)
5. **Nielsen-Gammon, J. W.**, and \*B. McRoberts, 2009: March 1843: The most abnormal month ever? *Historical Climate Variability and Impacts in the United States*. L.-A. Dupigny-Giroux and C. Mock, ed., Springer, Dordrecht, The Netherlands.
4. **Nielsen-Gammon, J. W.**, and \*D. A. Gold, 2008: Dynamical diagnosis: a comparison of quasigeostrophy and Ertel potential vorticity. pp. 183-202 in *Synoptic-Dynamic Meteorology and Weather Forecasting: A Tribute to Fred Sanders*. L. F. Bosart and H. B. Bluestein, Eds., Amer. Meteor. Soc., 423 pp.
3. **Nielsen-Gammon, J. W.**, 2003: Weather and climate. (20 pp.) *Texas Master Naturalist Statewide Curriculum*, M. M. Haggerty, ed., Texas Cooperative Extension and Texas Parks and Wildlife Dept.,
2. **Nielsen-Gammon, J. W.**, 2003: Large-scale atmospheric systems. *Handbook of Weather, Climate, and Water: Dynamics, Climate, Physical Meteorology, Weather Systems, and Measurements*, T. D. Potter and B. R. Colman, Eds. John Wiley and Sons, pp. 509-541.
1. **Nielsen-Gammon, J. W.**, 2003: Overview of weather systems. *Handbook of Weather, Climate, and Water: Dynamics, Climate, Physical Meteorology, Weather Systems, and Measurements*, T. D. Potter and B. R. Colman, Eds. John Wiley and Sons, pp. 503-508.

#### Editor of Books

1. Potter, T. D., and B. R. Colman, 2003: Handbook of Weather, Climate, and Water: Dynamics, Climate, Physical Meteorology, Weather Systems, and Measurements. John Wiley and Sons, 973 pp. (Editor of "Weather Systems" section, pp. 501-688.)

#### Encyclopedia Entries

4. **Nielsen-Gammon, J. W.**, 2010: Cold fronts. Encyclopedia of Climate and Weather, Second Edition, S. H. Schneider, ed., Oxford University Press, in press.
3. **Nielsen-Gammon, J. W.**, 1996: Cold fronts. Encyclopedia of Climate and Weather, S. H. Schneider, ed., Oxford University Press, 180-184.
2. **Nielsen-Gammon, J. W.**, 1996: Divergence. Encyclopedia of Climate and Weather, S. H. Schneider, ed., Oxford University Press 250-254.
1. **Nielsen-Gammon, J. W.**, 1996: Gust front. Encyclopedia of Climate and Weather, S. H. Schneider, ed., Oxford University Press 377-379.

#### Popular Press

**Nielsen-Gammon, J.**, September 28, 2008: Next one could be worse – and totally unlike Ike. *Houston Chronicle*, Houston, Texas.

*The Cattleman Magazine*, Texas and Southwestern Cattle Raisers Association, author of monthly column, *The Way of the Weather*, 2000-2005.

### Electronic Media

**Nielsen-Gammon, J. W.**, 2010: What Texas’s Petition for Reconsideration to the EPA says. *Atmo.Sphere*, Houston Chronicle web site,

www.chron.com/commons/readerblogs/atmosphere (direct link:

<http://tinyurl.com/y86q8nt>)

**Nielsen-Gammon, J. W.**, 2010: Record snowstorms are caused by...the weather. *Atmo.Sphere*, Houston Chronicle web site, www.chron.com/commons/readerblogs/atmosphere (direct link: <http://tinyurl.com/ybkg36x>)

**Nielsen-Gammon, J. W.**, 2010: D’Aleo and Watts report: Correction. *Atmo.Sphere*, Houston Chronicle web site, www.chron.com/commons/readerblogs/atmosphere (direct link: <http://tinyurl.com/yec3ads>)

**Nielsen-Gammon, J. W.**, 2010: The IPCC vs. Joseph D’Aleo and Anthony Watts.

*Atmo.Sphere*, Houston Chronicle web site,

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- National Climatic Data Center, and **Nielsen-Gammon, J. W.**, 2006: Climate of Texas. From the series "Climatography of the United States No. 60", available online (Oct. 2006) at [http://cdo.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl?directive=prod\\_select2&prodtype=CLIM60&subrnum="](http://cdo.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl?directive=prod_select2&prodtype=CLIM60&subrnum=). 13pp.
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- Nielsen-Gammon, J. W.**, 2002: Evaluation and Comparison of Preliminary Meteorological Modeling for the August 2000 Houston-Galveston Ozone Episode. TNRCC Report, 83 pp.
- Nielsen-Gammon, J. W.**, 2001: Initial Modeling of the August 2000 Houston-Galveston Ozone Episode. TNRCC Report, 71 pp.
- \*Han, S.-O., and **J. W. Nielsen-Gammon**, 2000: The Real-Time MM5 at Texas A&M: Model Configuration and Performance during TexAQS-2000. TNRCC Preliminary Report, 20 pp.
- Nielsen-Gammon, J. W.**, and \*S. Naumann, 2000: Application of the MM5 Mesoscale Model to the Houston-Galveston Metropolitan Area. TNRCC Report, 92 pp.
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- \*Studwell, A., and **J. Nielsen-Gammon**, 1995: Mesoscale Analysis of the March 27, 1994, Severe Weather Outbreak. NOAA Technical Memorandum NWS SR-166, 13 pp.
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Submitted or In Preparation

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- Nielsen-Gammon, J. W.**, X.-M. Hu, F. Zhang, and J. Pleim, 2010: Evaluation of planetary boundary layer scheme sensitivities for the purpose of parameter estimation. *Mon. Wea. Rev.*, in revision.
- Hu, X.-M., **J. W. Nielsen-Gammon**, and F. Zhang, 2010: Evaluation of three planetary boundary layer schemes in the WRF model. *J. Appl. Meteor. Clim.*, in revision.

- Banta, R. M., C. J. Senff, R. J. Alvarez, A. O. Langford, D. D. Parrish, M. K. Trainer, L. S. Darby, R. M. Hardesty, B. Lambeth, J. A. Neuman, W. M. Angevine, J. Nielsen-Gammon, S. P. Sandberg, and A. B. White, 2010: Dependence of daily peak O<sub>3</sub> concentrations near Houston, Texas on environmental factors: Wind speed, temperature, and boundary-layer depth. *J. Geophys. Res.*, submitted.
- \*Myoung, B., and **J. W. Nielsen-Gammon**, 2010: The role of upstream deformation in midwinter suppression of the North Pacific storm track. *J. Atmos. Sci.*, in preparation.
- McNeel, A., and **J. W. Nielsen-Gammon**, 2010: Diurnal wind variations in eastern Texas during TexAQS-II. *J. Geophys. Res.*, in preparation.

## STUDENT THESES AND DISSERTATIONS

### Doctoral Dissertations

- , August 2007: Interannual Variability of Summer Precipitation in Texas and its Implication to Summer Drought.
- , August 2005: Mesoscale Ensemble-Based Data Assimilation and Parameter Estimation.
- , August 2004: Investigation of Surface Inhomogeneity and Estimation of the GOES Skin Temperature Assimilation Errors of the MM5 Implied by the Inhomogeneity over Houston Metropolitan Area.
- , May 2004: A Potential Vorticity Diagnosis of the Relationship Between Upper Level Troughs and the Severe Convective Regime.
- , May 2002: Initialization of Clouds in the PSU/NCAR Mesoscale Model Using the Air Force's Real-Time Nephanalysis.
- May 1995: Using the Quasigeostrophic Potential Vorticity Height Tendency Equation to Diagnose the Development of Midtropospheric Mobile Troughs.

### Master's Theses

- May 2008: Drought Over the Past Century in Texas and New Mexico: Reducing Inhomogeneities in Long-Term Climate Records Via Statistical Methods to Study Drought.
- May 2005: Mixing Heights in Southeast Texas as Observed by Rawinsonde, Profiler, Lidar, and Microwave Temperature Profiler.
- ., December 2004: Mesoscale Predictability of an Extreme Warm-Season Precipitation Event.
- ., December 2004: The Multiple Vortex Nature of Tropical Cyclogenesis.
- August 2004: Idealized Models of the Coastal Circulation.
- ., December 2003: Verification of the WRF Model During a High Ozone Event Over Houston, TX.
- ., August 2003: An Investigation into the Contamination of WSR-88D VAD Wind Profile Output by Migrating Birds.
- August 2002: Seasonal Variation of Upper-Level Mobile Trough Development

Upstream of the Pacific Storm Track.

December 2001: A Numerical Simulation of Slantwise Convection: Its Structure and Evolution.

., August 2001: The South Central Texas Heavy Rain Event of October 1998: An MM5 Simulation and Diagnosis of Convective Initiation.

August 2001: Radiation Fog Forecasting Using a 1-Dimensional Model.

August 2001: Sea Breeze Characteristics during a High Ozone Event over Houston.

May 2000: Numerical Simulation of the 16-19 October 1994 Southeast Texas Heavy Rain Event: Precipitation Results and Diagnosis of the Lifting Mechanism.

May 2000: Design of the Texas Mesonet from the Aspect of Station Spacing.

., May 1999: An Eta-Model Output Study of Frontogenesis Conditions Favoring Development of a Troposphere-Spanning Front.

., May 1998: A Potential Vorticity Diagnostic Approach to Upper-Level Frontogenesis Within a Developing Baroclinic Wave.

August 1997: Three-Dimensional Simulation of Slantwise Convection During GALE IOP 1.

August 1996: A Quantitative Analysis of Baroclinic Instability in Extratropical Cyclogenesis.

August 1996: Mobile Trough Genesis over the Mongolian Plateau.

., May 1996: A Study of Mobile Trough Genesis over the Yellow Sea - East China Sea Region.

May 1996: An Air Pollution Trajectory Model for Southeast Texas.

August 1994: Low Level Jet Development During a Numerically Simulated Return Flow Event.

., August 1994: A Case Study of Symmetric Instability in the Presence of a Small-Scale Cyclone.

### **CURRENT GRADUATE STUDENTS (Committee chair or co-chair)**

Ph.D.:

M.S.:

### **SELECTED PRESENTATIONS**

\*denotes graduate student author

\*\*denotes undergraduate student author

#### *Invited (2000-present)*

Nielsen-Gammon, J. W., 2010: Meteorology and Air Pollution. Atmospheric Chemistry and Air Quality in Texas: Challenges and Opportunities, Center for Atmospheric Chemistry and the Environment, College Station, TX.

Nielsen-Gammon, J. W., 2010: Texas Weather and Climate. Gideon Lycecum Master Naturalist Class, Winedale, TX.

- Nielsen-Gammon, J. W., 2010: Weather and Climate Forecasting. 2010 Annual Conference and Trade Show, Texas Wine and Grape Growers Association, Richardson, TX.
- Nielsen-Gammon, J. W., 2010: Temperature and Precipitation Changes in Texas: Models vs. Observations. Annual Meeting, Texas Chapter, American Fisheries Society, Athens, TX.
- Nielsen-Gammon, J. W., X.-M. Hu, F. Zhang, and J. Pleim, 2009: Evaluation of Planetary Boundary Layer Scheme Sensitivities for the Purpose of Parameter Estimation. International Aerosol Modeling Algorithms Conference, Davis, CA.
- Nielsen-Gammon, J. W., 2009: The Changing Climate of Texas. Alamo Chapter, Sierra Club, San Antonio, TX.
- Nielsen-Gammon, J. W., 2009: Texas Climate Change and Surface Water Implications. Surface Water Quality Monitoring Workshop, Texas Commission on Environmental Quality, Burnet, TX.
- Nielsen-Gammon, J. W., 2009: Optimal Climate Normals: The Recent Past as Guide to the Near Future. Fall Leadership Conference, Southern Gas Association, San Antonio, TX.
- Solis, R., and J. Nielsen-Gammon, 2009: Texas Drought of Record. National Integrated Drought Information System and Climate Services Workshop for the Midwest United States, Lincoln, Neb.
- Nielsen-Gammon, J. W., 2009: Past Records of Extreme Precipitation Influencing Water Supply for Houston's Regional Watershed. Water in the Houston Metabolism – Houston's Water Needs and Water Quality for This Century. Shell Center for Sustainability, Houston, TX.
- Halpert, M., J. Arellano, and J. Nielsen-Gammon, 2009: El Nino and Its Impacts. Public forum, NOAA's National Weather Service, Austin, TX.
- Nielsen-Gammon, J. W., 2009: The Changing Climate of Texas. Monday Luncheon, San Antonio A&M Club, San Antonio, TX.
- Nielsen-Gammon, J. W., 2009: Dynamics of Jet Streams and Expected Weather Patterns for 2009-2010. Rancher's Gathering, Texas AgriLife Extension, Decatur, TX.
- Nielsen-Gammon, J. W., 2009: The Changing Climate of Texas. Voelker Park Open House, San Antonio Parks and Recreation Department, San Antonio, TX.
- Nielsen-Gammon, J. W., 2009: The Changing Climate of Texas. Global Climate Change: In Search of the Science, Weather Research Center and University of St. Thomas, Houston, TX.
- McRoberts, D. B., and J. W. Nielsen-Gammon, 2009: A High-Resolution Drought Diagnosis Tool for Texas. Southern Region Headquarters, National Weather Service, Fort Worth, TX.
- Nielsen-Gammon, J. W., 2009: The Changing Climate of Texas. Southern Region Headquarters, National Weather Service, Fort Worth, TX.
- Nielsen-Gammon, J. W., 2009: The Changing Climate of Texas. Fort Worth local chapter, American Meteorological Society, Fort Worth, TX.
- Nielsen-Gammon, J. W., 2009: What Does It Take to Get Into Graduate School? 8<sup>th</sup> Student Conference, American Meteorological Society, Phoenix, AZ.
- Nielsen-Gammon, J. W., and A. P. McNeel, 2008: The Impact of the Subtropical Sea Breeze on Air Pollution in Texas. AGU Fall Meeting, San Francisco, CA.
- Nielsen-Gammon, J. W., 2008: Temperature and Precipitation Changes in Far West Texas:

- Models vs. Observations. Big Bend Rio Grande Workshop, World Wildlife Fund, Alpine, TX.
- Nielsen-Gammon, J. W., 2008: Climate Change in Texas: Past vs. Future. Dept. of Ecosystem Science and Management, Texas A&M University.
- Nielsen-Gammon, J. W., 2008: Coastal Observing Networks for Weather Forecasting and Air Pollution Monitoring. GEOSS Workshop on Air Quality and Coastal Ecosystems, Boston, MA.
- Nielsen-Gammon, J. W., 2008: Temperature and Precipitation Changes in Far West Texas: Models vs. Observations. Far West Texas Climate Change Conference, El Paso, TX.
- Nielsen-Gammon, J. W., 2008: What Does the Historical Climate Record Tell Us About Future Climate Change in Texas? Climate Change Impacts on Texas Water conference, Austin, TX.
- Nielsen-Gammon, J. W., 2008: Climate Change and Water in North-Central Texas. Upper Trinity Regional Water Planning District Workshop, Lewisville, TX.
- Nielsen-Gammon, J. W., 2008: Changing Climate Along the Lower Rio Grande: Months, Years, Decades. International Day, Rio Grande Valley Livestock Show and Exhibition, Harlingen, TX (delivered remotely).
- Nielsen-Gammon, J. W., 2008: Climate Change and Water in Region C. Texas Region C Water Planning Group meeting, Grand Prairie, TX.
- Nielsen-Gammon, J. W., 2008: Texas Weather and Climate. Gideon Lycecum Master Naturalist Class, Burton, TX.
- Nielsen-Gammon, J. W., 2008: Severe Weather Events in Texas. Severe Weather Conference, University of the Incarnate Word, San Antonio, TX.
- Nielsen-Gammon, J. W., 2007: The Climate Change Debate. East Texas Baptist University, Marshall, TX.
- Nielsen-Gammon, J. W., 2007: Global Warming: Man vs. Nature. University of Texas System Annual Risk Management Conference, Galveston, TX.
- Nielsen-Gammon, J. W., 2007: Texas Weather and Climate. Gideon Lycecum Master Naturalist Class, Lagrange, TX.
- Nielsen-Gammon, J. W., 2007: Texas Weather and Climate. Ft. Bend/Waller Master Naturalist Chapter Meeting, Sugar Land, TX.
- \*Nielsen-Gammon, J. W., 2007: Texas Hurricanes, Past and Future. Hurricane Frequency Analysis Workshop, Texas A&M Dept. of Civil Engineering, College Station, TX.
- Nielsen-Gammon, J. W., 2007: Global Warming: Man vs. Nature. Northeast Texas Community College, Mount Pleasant, TX.
- Nielsen-Gammon, J. W., 2007: Global Warming; Man vs. Nature. Rotary Club, Bastrop, TX.
- Nielsen-Gammon, J. W., 2007: Gardening in a Changing Climate. Anderson County Master Gardener Annual Conference, Palestine, TX.
- Nielsen-Gammon, J. W., 2007: Global Warming: Man vs. Nature. Texas A&M University System Annual Risk Management Conference, College Station, TX.
- Nielsen-Gammon, J. W., 2007: Texas Historical Climate Variations. Texas Legislative Briefing, Austin, TX.
- Nielsen-Gammon, J. W., 2007: Long-term Weather Forecast: The Way of the Weather over the Next Few Months and Years. Texas and Southwestern Cattle Raisers Association Annual Conference, Fort Worth, TX.
- Nielsen-Gammon, J. W., \*C. Powell, M. J. Mahoney, W. Angevine, C. Senff, A. White, C.

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Nielsen-Gammon, J. W., 2007: East Texas Climate. Washington County Master Naturalist Chapter Meeting, Brenham, TX.

Nielsen-Gammon, J. W., 2007: Weather Trends. Texas Farm Bureau Leadership Conference, Austin, TX.

Nielsen-Gammon, J. W., 2006: Climate Change: Global or Local? Us or It? So What? 13<sup>th</sup> Annual North Central Texas Cattleman's Clinic, Graham, TX.

Nielsen-Gammon, J. W., 2006: The Impact of Global Warming on Hurricane Severity. Plenary Session, International Conference on Probabilistic Safety Assessment and Management, New Orleans, LA.

Nielsen-Gammon, J. W., 2006: Drought Monitoring and Prediction. East Texas Cow/Calf Workshop, Athens, TX.

Nielsen-Gammon, J. W., 2006: Drought Monitoring and Prediction. East Texas Regional Water Planning Group Meeting, Nacogdoches, TX.

Nielsen-Gammon, J. W., 2006: Hurricane Season 2004/2005 and Future Activity. Gulf of Mexico Hurricane Risk Management Seminar, Houston, TX.

Nielsen-Gammon, J. W., 2005: East Texas Climate. Ft. Bend/Waller Master Naturalist Chapter Meeting, Rosenberg, TX.

Nielsen-Gammon, J. W., 2005: Drought in the Land of Massive Climate Divisions. Texas Drought Workshop, Austin, TX.

Nielsen-Gammon, J. W., 2004: Climate Changes and the Effects on Texas Agriculture. Texas Plant Protection Conference, College Station, TX.

Nielsen-Gammon, J. W., 2004: East Texas Climate. Ft. Bend/Waller Master Naturalist Chapter Meeting, Rosenberg, TX.

Nielsen-Gammon, J. W., 2004: The Effect of the Complex Coastline in the Houston Area. The Houston Environmental Aerosol Thunderstorm Project First Planning Meeting, UCAR, Boulder, CO.

Nielsen-Gammon, J. W., 2004: Meteorology – State of the Science and Issues. TexAQS II Science Meeting, Texas Commission on Environmental Quality, Austin, TX.

Nielsen-Gammon, J. W., 2004: Using Climatology and Long-Range Forecasting on a Farm Operation. Blackland Income Growth Conference, Waco, TX.

Nielsen-Gammon, J. W., A. Odins, and F. Zhang, 2003: How Predictable Are Major Rainfall Events in Central Texas? – Some Meteorological Modeling Results. Flood Conference: Living in Flood Alley, Southwest Texas State University, San Marcos, TX.

Nielsen-Gammon, J. W., \*B. Myoung, and \*D. Gold, 2003: Deformation-Induced Changes in Upper-Tropospheric Mobile Trough Intensity. EGS-AGU-EUG Joint Assembly, Nice, France.

Nielsen-Gammon, J. W., 2003: Observation and Modeling of Houston Ozone Meteorology. Georgia Institute of Technology, Atlanta, GA.

Nielsen-Gammon, J. W., 2002: Observation and Modeling of Houston Ozone Meteorology. Sonoma Technology, Inc., Sonoma, CA.

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- Nielsen-Gammon, J. W., 2002: Observation and Modeling of Houston Ozone Meteorology. University of Houston, Houston, TX.
- Nielsen-Gammon, J. W., 2002: If the air's bad, should you blame the weatherperson? American Meteorological Society, Houston Chapter, Houston, TX.
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**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Friday, March 26, 2010 4:48:46 PM

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Mark,

you sparked a great discussion. there's a similar top-10 list at

<http://www.skepticalscience.com/argument.php>

see also the snappy responses to a longer list at

<http://www.grist.org/article/series/skeptics/>

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On Mar 20, 2010, at 12:42 PM, Boslough wrote:

- >
- > Folks, I'm preparing a presentation for next month's meeting of New
- > Mexicans for Science and Reason. The title is "Hockey Stick
- > Politics: Climategate or Clusterpuck?" (link: <http://www.nmsr.org/meetings.htm#latest>)
- > . I could use some help.
- >

- > One of my main goals is to demonstrate a pattern of mistakes,
- > misrepresentation, misconduct, and outright fraud by denialists.
- > I'm putting together a "Top Ten List" of the examples denialist
- > wrongdoing that if had been done by mainstream scientists would have
- > resulted in calls for firings or worse. The scientific community
- > has not been willing to call out the denialists on this, presumably
- > because we don't consider non-peer-reviewed literature to be worth
- > criticizing. In our world, in which claims are debated in by the
- > rules of science, that would be true. But In the world of climate
- > politics, the non-peer-reviewed sources are given equal or greater
- > weight by the public and by policy makers, and should therefore be a
- > target of intense scientific criticism.
- >
- > Here's the start of my top-ten list. If a mainstream scientist were
- > involved in anything close to one of the items on this list, it
- > would be front-page news and wall-to-wall talk-show fodder, but
- > denialists continue to get a free pass (implying that they are
- > expected to lie and cheat).
- >
- > 1. Plagiarism and misrepresentations in the Wegman Report. At
- > least three pages of Wegman were cribbed with only minor word
- > changes from Bradley's textbook. Even the title of the Wegman
- > Report misrepresents the MBH hockey stick as a global climate
- > reconstruction. Imagine the media reaction if three pages of an
- > IPCC publication were discovered to have been plagiarized.
- >
- > 2. Non-scientists impersonating scientists. The Oregon Petition
- > contains many names of individuals who claim to be scientists, but
- > who in fact are engineers, dentists, pharmacists, veterinarians,
- > etc. It would be considered an unethical or even criminal act for
- > an unqualified person to masquerade as a member of one of those
- > occupations and to give professional advice under that pretense. It
- > seems that scientists are the only professionals expected to have
- > the humility to allow others to practice their trade without any
- > training or basic understanding.
- >
- > 3. Willful removal of uncertainty bands on the MBH hockey stick
- > graph by Singer et al. in the Non-IPCC report, thereby
- > misrepresenting its purported accuracy. Removing information from a
- > graph when replotting it is unethical, especially when the
- > information removed contradicts the point being made by the party
- > who is criticizing the work.
- >
- > 4. Removal of data from the Sargasso Sea temperature history of
- > Keigwin (1996) and replacement with a fabricated temperature by
- > Robinson et al. (2007). Robinson also replotted Keigwin's data on a
- > shifted time scale, either out of ignorance or willful desire to
- > misrepresent it. The sanitized and time-shifted Keigwin graph was
- > reproduced in the Non-IPCC report and the fabricated data point was
- > used to make the claim that temperatures were higher during the MWP.
- >
- > 5. Jack Schmitt's claim in a 2009 white paper that Arctic (sic)
- > sea ice has returned to 1989 levels of coverage. (link: <http://www.lpi.usra.edu/decadal/leag/>)
- > . The fact that this is an obscure paper is irrelevant; Schmitt is
- > associated with the Heartland Institute, and putting false
- > statements into un-reviewed reports is a standard way of meme
- > laundering (as John Mashey puts it). I wrote to Schmitt about this
- > and sent him the NSIDC data, so he is aware that his claim has no
- > factual basis. Nevertheless, he refuses to correct or withdraw the
- > paper.

>  
> 6. The claim that it has been cooling since 1998. Im not sure  
> who was the first to come up with this (Bob Carter?). We all know  
> that this is climatologically meaningless and contrived to deceive,  
> but non-scientists and gullible journalists think it is important.  
> A statement that it has been warming since 19xx (where xx is any 2-  
> digit number other than 98) is equally true. This kind of cherry  
> picking would be considered criminally fraudulent if it were used to  
> calculate returns on an investment and advertised that way.  
>  
> 7. The claim that, because paleoclimate records show temperature  
> increases lead CO2 concentration increases, then CO2 cannot cause  
> temperatures to rise. Who was the first to make this claim, and why  
> do intelligent people not recognize the obvious logical flaw? Any  
> scientist who makes this argument either incompetent or is  
> intentionally perpetrating fraud. We really need to figure out how  
> to explain this to ordinary people (Richard Alley did it best at  
> AGU, but he was talking to scientists).  
>  
> If anyone has any comments, suggestions, or additions to my list,  
> please let me know. I'm presenting this on April 14.  
>  
> Thanks!  
>  
> Mark Boslough  
>  
>  
>

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**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Thursday, March 25, 2010 10:33:50 AM

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Hi again,  
Several of you liked my "three slides-ten minutes" idea and some suggested changes/additions, mainly to reduce the jargon and acronyms in the slides and notes, increase the explanations (notes) a bit, and provide references/sources. I have tried to do this and present the materials in various ways that you may find useful. These are all in a folder on my webshare at [www.fin.ucar.edu/antheswebshare/](http://www.fin.ucar.edu/antheswebshare/) which you may download.

The materials include:

1. A Word file with the slides and notes in one document. This file is the easiest to review, print out, share with others, etc.
2. A Word file with the notes alone.
3. A ppt file with the notes in the "speaker notes" part of the file.
4. A pdf version of the slides with the notes in "balloons" at the upper left of each slide. Click on the balloons to read the notes.
- 5 A jpg file of each slide

Several of you asked if you could use these materials. Absolutely yes as far as I am concerned. But I don't "own" any of the raw materials, so if you formally publish any of this you should probably go to the original source and ask for permission.

I would be happy to receive additional comments on these materials or suggestions for improvements.

Thanks again to Kevin Trenberth for helping me develop this simple, short tutorial.

Rick

Rick Anthes wrote:

I like these simple statements countering common deniers' claims. The FAQ approach is also pretty effective. Anything that does not contain long paragraphs and many pages of text--we live in a sound-byte world.

In response to a colleague's question to me recently, "if I could only show one slide to demonstrate global warming and its main cause, what would that be?" I thought about this and discussed with Kevin Trenberth, and I came up with the attached three slides. The one my colleague wanted to use was the third one. I thought one slide might be too limiting and so I tried "three slides and ten minutes" to make the case. Here is what I came up with after looking at hundreds of slides:

### Three slides and Ten Minutes

If I had only three slides and ten minutes to convince a lay person that Earth is warming and that increasing greenhouse gases, notably carbon dioxide, was the primary cause of this warming, these three are the ones I would show. (View these slides in slide show mode.)

The first slide is observations only (mean global surface temperature and CO<sub>2</sub>). This suggests a correlation, though not perfect, of increasing CO<sub>2</sub> and temperature. The positive correlation is easily explained by basic physics--no complex models required. The fact that the temperature increase shows lots of variability from year to year and even decade to decade on top of the long-term trend says that other important processes and phenomena are occurring on time scales of years to decades. These include natural (internal atmosphere-ocean interactions) variability, a small effect due to solar variability, emission of atmospheric aerosols (dust particles and smoke, which actually cause surface cooling; without them the warming would be greater) and occasional volcanoes). It also shows that we should not be surprised when one or two years are colder than the previous few years, even in a world that is warming overall.

Slide 2, which shows a nearly monotonic mean global sea level rise, is very compelling. Global mean sea level is a great integrator--it doesn't "care" about a cold winter or two in the northeastern US or Europe, a heavy snowfall in Washington DC, a hot summer in Kansas, or hurricanes like Katrina. It occurs because of melting glaciers (ice over land), and the thermal expansion of warming sea water. It is also easier to measure now with satellites than the global mean surface temperature.

Slide 3 shows that models with anthropogenic greenhouse gas forcing and aerosols in the atmosphere can pretty well explain the observed surface temperature trend and variability, providing strong evidence confirming the hypothesis that greenhouse gas increases are the main cause of global warming, but that other important things are going on from one year or even decades to the next.

Rick

PS--thanks to Kevin for providing these slides.

PPS--If I was restricted to only one slide and 3 minutes I would probably choose Slide #2.

Challenges and proposals for alternate slides are welcome, but let's not go over three!

Rick

Paul Gross wrote:

Hello Mark, et al,

I'd like to comment on this from the broadcast perspective. As a broadcast meteorologist (both a CCM and CBM) who does as much as possible to educate the public about global warming (including writing an entire chapter about this in my upcoming book about Michigan weather), I think I've heard enough of the public's thoughts on the matter to offer some suggestions.

First of all, as I believe I mentioned in a previous e-mail several months ago, we need to keep the focus on educating through science, rather than attacking the skeptics. Inflammatory language, and statements directed specifically at skeptics and their practices only cause them to dig their heels deeper and fight harder through personal attacks upon us scientists.

Your top-ten list should, in my opinion, focus on the ten most-cited points made by skeptics, and explain how rigorous science has emphatically proved them all wrong.

For example:

1. Skeptics like to say that solar output changes are responsible for the warming. While this may have had a small impact 100 years ago, it has NOT been a factor during the unusual warming of the past several decades. This is agreed upon scientific fact.

2. Skeptics like to say that the warming has stopped (since 1998, obviously), and the response to this point has already been discussed in some of our previous e-mails (plus, some recent global climate models actually predict 10-20 year flat periods...but the warming always resumes robustly). This is agreed upon scientific fact.

3. Skeptics like to say that urbanization (urban sprawl) has increased the size of the urban heat island effect, and

artificially skewed temperatures upward. The IPCC specifically researched this, and the globally averaged impact from urbanization is only 0.006 degrees Celsius. Another key point to remember is that ocean temperatures are rapidly increasing too...and there's no urban heat island effect over the oceans. This is agreed upon scientific fact.

4. Skeptics like to say that this is just another one of Earth's cycles, and there have been comparable warm periods in the past. While it's true that we've been this warm before, those previous warm periods all started with changes in the Earth's axis or orbit, which initiated a warming that caused a massive GHG release, which then accelerated the warming. This time, however, there has been no change in Earth's axis or orbit whatsoever...the warming had to be initiated by something else. This is agreed upon scientific fact.

5. Skeptics like to say that our climate models are unreliable. I'd rather point out that a climate model is "tested" by seeing how well it "predicts" our current warming and, to date, there has not been one climate model...not one...that successfully replicates our current warming WITHOUT including the anthropogenic GHG component. And besides, one of the most agreed upon predictions by climate models was that higher latitudes would experience a greater climatic response to the increase in GHG...and this most indeed is occurring. This is agreed upon scientific fact.

6. Skeptics like to say that we need more time for research...that nothing should be done until we're "sure" about this. I'd respond to this by saying that the minimum Arctic ice extent has been at and near record lows for each of the past three years. Climate models originally predicted this abrupt decline in Arctic ice to occur between 2020 And 2030, but we are quite possibly seeing it occurring now. Earth is now responding in other ways as well, such as documented thawing of permafrost that may release enormous additional GHG into the atmosphere and further accelerate the warming, and in well-documented species migration. Waiting means that Earth potentially passes critical, irreversible tipping points. This is agreed upon scientific fact.

7. Skeptics like to paint a picture of discord among the scientific community. I'd respectfully counter with the fact that there is no schism among climate scientists worldwide...most are in agreement about the fact that we are warming at a highly unusual and

unnatural rate, and the proximate cause is anthropogenic GHG. There will always be a few radicals with different ideas but, in the end, rigorous, debated science always wins out. The cigarette smoking issue cited in a previous e-mail is perfect to cite here. And don't forget to cite the 2008 survey released by the Statistical Assessment Service at George Mason University. Of the 489 Earth and atmospheric scientists surveyed by Harris Interactive, 97 percent said that global temperatures have increased during the past 100 years, and 74 percent agreed that "currently available scientific evidence substantiates the occurrence of human-induced greenhouse warming." The findings mark a significant increase in concern over climate change since 1991, when a Gallup survey of the same universe of scientists showed only 60 percent agreed that temperatures were up and 41 percent believed that evidence pointed to human activity as the cause. This is agreed upon scientific fact.

These are seven suggestions...I'm sure everybody can come up with three more. Remember that the public doesn't know the "inside baseball" about climate change. They have never heard about the Wegman report, and don't know who Fred Singer is, nor the Heartland Institute and Oregon Petition (perhaps they've heard of the petition). I would just focus on letting the skeptics deal with their rumors and inuendos, while we take the high road and respond with science. Over time, a mature message born of science, rather than personal attacks, will win.

These are my humble thoughts on the matter. Hope this helps,

Paul

-----Original Message-----

From: Boslough [<mailto:mbeb@unm.edu>]

Sent: Saturday, March 20, 2010 3:42 PM

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Seeley; Oliver Morton;  
Cheryl\_H; Richard 'Somerville; Martin  
Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies;  
Pete Myers;  
Michael Oppenheimer; Tom Wigley; Naomi Oreskes  
Subject: Top Ten List of denialist misconduct

Folks, I'm preparing a presentation for next month's meeting of New Mexicans for Science and Reason. The title is "Hockey Stick Politics: Climategate or Clusterpuck?" (link: <http://www.nmsr.org/meetings.htm#latest>). I could use some help.

One of my main goals is to demonstrate a pattern of mistakes, misrepresentation, misconduct, and outright fraud by denialists. I'm putting together a "Top Ten List" of the examples denialist wrongdoing that if had been done by mainstream scientists would have resulted in calls for firings or worse. The scientific community has not been willing to call out the denialists on this, presumably because we don't consider non-peer-reviewed literature to be worth criticizing. In our world, in which claims are debated in by the rules of science, that would be true.

But in the world of climate politics, the non-peer-reviewed sources are given equal or greater weight by the public and by policy makers, and should therefore be a target of intense scientific criticism.

Here's the start of my top-ten list. If a mainstream scientist were involved in anything close to one of the items on this list, it would be

front-page news and wall-to-wall talk-show fodder, but denialists continue to get a free pass (implying that they are expected to lie and cheat).

1. Plagiarism and misrepresentations in the Wegman Report. At least three pages of Wegman were cribbed with only minor word changes from Bradley's textbook. Even the title of the Wegman Report misrepresents the MBH hockey stick as a global climate reconstruction. Imagine the media reaction if three pages of an IPCC publication were discovered to have been plagiarized.

2. Non-scientists impersonating scientists. The Oregon Petition contains many names of individuals who claim to be scientists, but who in fact are engineers, dentists, pharmacists, veterinarians, etc. It would

be considered an unethical or even criminal act for an unqualified person to masquerade as a member of one of those occupations and to give

professional advice under that pretense. It seems that scientists are

the only professionals expected to have the humility to allow others to practice their trade without any training or basic understanding.

3. Willful removal of uncertainty bands on the MBH hockey stick graph

by Singer et al. in the Non-IPCC report, thereby misrepresenting its purported accuracy. Removing information from a graph when replotting it is unethical, especially when the information removed contradicts the point being made by the party who is criticizing the work.

4. Removal of data from the Sargasso Sea temperature history of Keigwin (1996) and replacement with a fabricated temperature by Robinson et al. (2007). Robinson also replotted Keigwin's data on a shifted time scale,

either out of ignorance or willful desire to misrepresent it. The sanitized and time-shifted Keigwin graph was reproduced in the Non-IPCC report and the fabricated data point was used to make the claim that temperatures were higher during the MWP.

5. Jack Schmitt's claim in a 2009 white paper that Artic (sic) sea ice has returned to 1989 levels of coverage. (link: <http://www.lpi.usra.edu/decadal/leag/>). The fact that this is an obscure paper is irrelevant; Schmitt is associated with the Heartland Institute,

and putting false statements into un-reviewed reports is a standard way of meme laundering (as John Mashey puts it). I wrote to Schmitt about this

and sent him the NSIDC data, so he is aware that his claim has no factual basis. Nevertheless, he refuses to correct or withdraw the paper.

6. The claim that it has been cooling since 1998. I'm not sure who was the first to come up with this (Bob Carter?). We all know that this is climatologically meaningless and contrived to deceive, but non-scientists and gullible journalists think it is important. A statement that it has

been warming since 19xx (where xx is any 2-digit number other than 98) is equally true. This kind of cherry picking would be considered criminally fraudulent if it were used to calculate returns on an

investment and  
advertised that way.

7. The claim that, because paleoclimate records show  
temperature  
increases lead CO2 concentration increases, then CO2  
cannot cause  
temperatures to rise. Who was the first to make this  
claim, and why do  
intelligent people not recognize the obvious logical  
flaw? Any  
scientist  
who makes this argument either incompetent or is  
intentionally  
perpetrating fraud. We really need to figure out how to  
explain this to

ordinary people (Richard Alley did it best at AGU, but  
he was talking  
to  
scientists).

If anyone has any comments, suggestions, or additions to  
my list,  
please let me know. I'm presenting this on April 14.

Thanks!

Mark Boslough

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**Cc:** [Boslough](#); [Boslough, Mark B](#); [Stephen H Schneider](#) [trenbert@ucar.edu](mailto:trenbert@ucar.edu); [Thomas Crowley](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham "Bench" Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A. "Bono" James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Michael "Dettinger" Phil Duffy](#); [Paul J. "Ehlenbach" Kerry Emanuel](#); [James Estes](#); [Veronika "Eyring" David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c jakob](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](mailto:wily@ucar.edu); [Ron Lehman](#); [John Lewis](#); [Steven A. "Lloyd \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]" Jane Long](#); [Janice Lough](#); [mann](#); [emaurer@scu.edu](mailto:emaurer@scu.edu); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [John FB" Mitchell](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Stu" Ostro](#); [j palutikof](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](mailto:plattner@ipcc.unibe.ch); [V. Ramaswamy](#); [Veerabhadran" Ramanathan](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Robert "Sausen, DLR" jsanter](#); [John SchellInhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s sherwood](#); [Adrian Simmons](#); [soggi anthony](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](mailto:tswetnam@ltrr.arizona.edu); [Karl Taylor](#); [claudia tebaldi](#); [Joao P" Teixeira](#); [Simon Tett](#); [Thomas A. "Tombrello" David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Peter" Thorne](#); [Mike Wallace](#); [Bud Ward](#); [David "Warrilow \(GA\)" Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Penny" Whetton](#); [Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Erik M" Conway](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Alison" Sowden](#); [Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard"](#); [Somerville](#); [Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#); [Naomi Oreskes](#)  
**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Tuesday, March 23, 2010 1:06:41 AM

---

I think you'll need a top 20.

Tom.

+++++++==

Ben Santer wrote:

- > Dear Mark,
- >
- > I think that the erroneous statistical test used by Professor David
- > Douglass and colleagues in the 2008 Douglass et al. International
- > Journal of Climatology (IJoC) paper is very deserving of inclusion on
- > your "Top Ten List".
- >
- > Application of a flawed "robust statistical test" allowed Douglass et
- > al. to reach the incorrect conclusion that observed tropical temperature
- > trends are fundamentally inconsistent with the trends simulated by all
- > climate models. This incorrect conclusion was then disseminated and
- > amplified by Fox News, the Heartland Institute, Fred Singer's "NIPCC
- > Report", etc.
- >
- > Full details of the statistical errors in the Douglass et al. IJoC paper
- > are given in one of my previous "Open Letters".
- >
- > It is particularly troubling that Douglass et al. have failed to retract
- > their IJoC paper, or even to publicly acknowledge the existence of
- > errors in their method of testing the statistical significance of
- > differences between modeled and observed tropical temperature trends.

>  
> Despite the extraordinary (and incorrect) public claims made on the  
> basis of the Douglass et al. paper (for example, Fred Singer has used  
> the paper's findings to claim that "Nature, Not Humans, Rules the  
> Climate"), the story of how this seriously-flawed paper was published  
> has received no media scrutiny. This asymmetry is rather ironic. Serious  
> scientific errors by Douglass et al. are ignored. Spurious claims of  
> flawed research by "IPCC scientists" are headline news.

>  
> With best regards,

>  
> Ben  
> Boslough wrote:

>>  
>> Folks, I'm preparing a presentation for next month's meeting of New  
>> Mexicans for Science and Reason. The title is "Hockey Stick Politics:  
>> Climategate or Clusterpuck?" (link:  
>> <http://www.nmsr.org/meetings.htm#latest>). I could use some help.

>>  
>> One of my main goals is to demonstrate a pattern of mistakes,  
>> misrepresentation, misconduct, and outright fraud by denialists. I'm  
>> putting together a "Top Ten List" of the examples denialist wrongdoing  
>> that if had been done by mainstream scientists would have resulted in  
>> calls for firings or worse. The scientific community has not been  
>> willing to call out the denialists on this, presumably because we don't  
>> consider non-peer-reviewed literature to be worth criticizing. In our  
>> world, in which claims are debated in by the rules of science, that  
>> would be true. But In the world of climate politics, the  
>> non-peer-reviewed sources are given equal or greater weight by the  
>> public and by policy makers, and should therefore be a target of  
>> intense scientific criticism.

>>  
>> Here's the start of my top-ten list. If a mainstream scientist were  
>> involved in anything close to one of the items on this list, it would  
>> be front-page news and wall-to-wall talk-show fodder, but denialists  
>> continue to get a free pass (implying that they are expected to lie  
>> and cheat).

>>  
>> 1. Plagiarism and misrepresentations in the Wegman Report. At  
>> least three pages of Wegman were cribbed with only minor word changes  
>> from Bradley's textbook. Even the title of the Wegman Report  
>> misrepresents the MBH hockey stick as a global climate  
>> reconstruction. Imagine the media reaction if three pages of an IPCC  
>> publication were discovered to have been plagiarized.

>>  
>> 2. Non-scientists impersonating scientists. The Oregon Petition  
>> contains many names of individuals who claim to be scientists, but who  
>> in fact are engineers, dentists, pharmacists, veterinarians, etc. It  
>> would be a considered an unethical or even criminal act for an  
>> unqualified person to masquerade as a member of one of those  
>> occupations and to give professional advice under that pretense. It  
>> seems that scientists are the only professionals expected to have the  
>> humility to allow others to practice their trade without any training  
>> or basic understanding.

>>  
>> 3. Willful removal of uncertainty bands on the MBH hockey stick  
>> graph by Singer et al. in the Non-IPCC report, thereby misrepresenting  
>> its purported accuracy. Removing information from a graph when  
>> replotting it is unethical, especially when the information removed  
>> contradicts the point being made by the party who is criticizing the

>> work.  
>>  
>> 4. Removal of data from the Sargasso Sea temperature history of  
>> Keigwin (1996) and replacement with a fabricated temperature by  
>> Robinson et al. (2007). Robinson also replotted Keigwin's data on a  
>> shifted time scale, either out of ignorance or willful desire to  
>> misrepresent it. The sanitized and time-shifted Keigwin graph was  
>> reproduced in the Non-IPCC report and the fabricated data point was  
>> used to make the claim that temperatures were higher during the MWP.  
>>  
>> 5. Jack Schmitt's claim in a 2009 white paper that Artic (sic) sea  
>> ice has returned to 1989 levels of coverage. (link:  
>> [http://\\*www.\\*lpi.usra.edu/decadal/leag/](http://*www.*lpi.usra.edu/decadal/leag/)). The fact that this is an  
>> obscure paper is irrelevant; Schmitt is associated with the Heartland  
>> Institute, and putting false statements into un-reviewed reports is a  
>> standard way of meme laundering (as John Mashey puts it). I wrote to  
>> Schmitt about this and sent him the NSIDC data, so he is aware that  
>> his claim has no factual basis. Nevertheless, he refuses to correct  
>> or withdraw the paper.  
>>  
>> 6. The claim that it has been cooling since 1998. Im not sure who  
>> was the first to come up with this (Bob Carter?). We all know that  
>> this is climatologically meaningless and contrived to deceive, but  
>> non-scientists and gullible journalists think it is important. A  
>> statement that it has been warming since 19xx (where xx is any 2-digit  
>> number other than 98) is equally true. This kind of cherry picking  
>> would be considered criminally fraudulent if it were used to calculate  
>> returns on an investment and advertised that way.  
>>  
>> 7. The claim that, because paleoclimate records show temperature  
>> increases lead CO2 concentration increases, then CO2 cannot cause  
>> temperatures to rise. Who was the first to make this claim, and why  
>> do intelligent people not recognize the obvious logical flaw? Any  
>> scientist who makes this argument either incompetent or is  
>> intentionally perpetrating fraud. We really need to figure out how to  
>> explain this to ordinary people (Richard Alley did it best at AGU,  
>> but he was talking to scientists).  
>>  
>> If anyone has any comments, suggestions, or additions to my list,  
>> please let me know. I'm presenting this on April 14.  
>>  
>> Thanks!  
>>  
>> Mark Boslough  
>>  
>>  
>>  
>>  
>>  
>>  
>  
>

**From:** [Steven Sherwood](#)  
**To:** [Paul Gross](#)  
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**Subject:** Re: talk  
**Date:** Monday, March 22, 2010 9:05:03 PM

---

Paul et al.,

1. I just gave a public talk on Sunday following a somewhat unconventional approach that seemed to work -- I emphasized basic physics, broad context, and parallels to past inconvenient truths. If you or anyone else is interested you can find the slides here (feedback appreciated):

[http://web.science.unsw.edu.au/%7Estevensherwood/warming\\_II.pdf](http://web.science.unsw.edu.au/%7Estevensherwood/warming_II.pdf)

It is for an Australian audience. I can send Keynote version if anyone wants.

2. More generally, inspired by Tim Barnett's suggestion (new to me), would it be worth starting a clearinghouse (e.g. a wiki) where those of us who do public presentations can share slides, talk ideas, and feedback? The deniers have probably been doing this more than we have. It could be a time-saving resource for those preparing talks, and allow successful communication strategies to spread faster?

(BTW one historical parallel is a guy who made a living for over 20 years convincing people in 19th-century England that the world was flat -- he never convinced any scientists, but won nearly every public "debate" with them and won many converts because he spent years honing his bogus but persuasive pseudoscience arguments while they were busy working...sound familiar?).

Steve

Paul Gross wrote:

>

> This is outstanding, Rick and, speaking for those of us in the media, we

> can really use clear, simple visuals like this. In fact, I'm giving a

> talk this Sunday called "The Truth About Global Warming"...I'm going to  
> use this (and the graph Curt sent me personally in a separate e-mail).  
> If any of the rest of you have anything I can use to help communicate  
> the science, please send it along!

>

> Thanks!

>

> Paul

>

> -----Original Message-----

> \*From:\* Rick Anthes [<mailto:anthes@ucar.edu>]

> \*Sent:\* Monday, March 22, 2010 3:38 PM

> \*To:\* Paul Gross

> \*Cc:\* Boslough; Boslough Mark B; Stephen H Schneider;

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> George Boer; Celine J. W. Bonfils; James A. 'Bono; James Boyle; Ray

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> 'Ehlenbach; Kerry Emanuel; James Estes; Veronika 'Eyring; David

> Fahey; Chris Field; Peter Foukal; Melissa Free; Julio Friedmann;

> Bill Fulkerson; Inez Fung; Jeff Garberson; PETER GENT; Nathan

> Gillett; peter gleckler; Bill Goldstein; Hal Graboske; Tom

> Guilderson; Leopold Haimberger; Alex Hall; James Hansen; harvey;

> Klaus Hasselmann; Susan Joy Hassol; Gabi Hegerl; Isaac Held; Bob

> Hirschfeld; Jeremy Hobbs; Dr. Elisabeth A. Holland; Greg Holland;

> Brian Hoskins; mhughes; James Hurrell; Ken Jackson; c jakob; Gardar

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> 'Mitchell; Phil Mote; Neville Nicholls; Gerald R. North; Astrid E.J.

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> Sarah Raper; Phil Rasch; Kathryn Rauhut; Doug Rotman; Terry L. Root;

> Robert 'Sausen DLR'; jsanter; John Schellnhuber; David Schimel;

> Michael Schlesinger; Gavin Schmidt; Christina L. Schomer; Lynda

> Seaver; Dian J. Seidel; Ted Sheppard; s sherwood; Adrian Simmons;

> socci anthony; brian soden; Susan Solomon; Ken Sperber; Anne Stark;

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> Taylor; claudia tebaldi; Joao P' 'Teixeira; Simon Tett; Thomas A.'

> 'Tombrello; David Thompson; Lonnie Thompson; ELLEN THOMPSON; Peter'

> 'Thorne; Mike Wallace; Bud Ward; David 'Warrilow (GA)'; Warren

> Washington; Andrew Weaver; Michael Wehner; Frank Wentz; Penny'

> 'Whetton; Dean N. Williams; Gordon Yano; Francis W. Zwiers; Erik M'

> 'Conway; Sanjay Khanna; Graham Cogley; Jeffrey Kargel; W. Crawford

> Elliott; John Weyant; Anthony Janetos; Alison 'Sowden; Vernon

> Squire; Eric Garen; Peter Cross; Charles Zeller; Ian Murdock;

> Victoria A Arroyo; Rashida Leonard; Stephanie Fontenoy; John Collee;

> Sarah-jane Potts; Greg Dutton; Richard B. Rood;

> Brien Seeley; Mark Seeley; Oliver Morton;

> Cheryl\_H; Richard 'Somerville; Martin Heimann;

> Don Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies; Pete  
> Myers; Michael Oppenheimer; Tom Wigley; Naomi Oreskes; Anthes Richard  
> \*Subject:\* Re: Top Ten List of denialist misconduct

>  
> I like these simple statements countering common deniers' claims.  
> The FAQ approach is also pretty effective. Anything that does not  
> contain long paragraphs and many pages of text--we live in a  
> sound-byte world.

>  
> In response to a colleague's question to me recently, "if I could  
> only show one slide to demonstrate global warming and its main  
> cause, what would that be?" I thought about this and discussed with  
> Kevin Trenberth, and I came up with the attached three slides. The  
> one my colleague wanted to use was the third one. I thought one  
> slide might be too limiting and so I tried "three slides and ten  
> minutes" to make the case. Here is what I came up with after  
> looking at hundreds of slides:

>  
> Three slides and Ten Minutes

>  
> If I had only three slides and ten minutes to convince a lay person  
> that Earth is warming and that increasing greenhouse gases, notably  
> carbon dioxide, was the primary cause of this warming, these three  
> are the ones I would show. (View these slides in slide show mode.)

>  
> The first slide is observations only (mean global surface  
> temperature and CO2). This suggests a correlation, though not  
> perfect, of increasing CO2 and temperature. The positive  
> correlation is easily explained by basic physics--no complex models  
> required. The fact that the temperature increase shows lots of  
> variability from year to year and even decade to decade on top of  
> the long-term trend says that other important processes and  
> phenomena are occurring on time scales of years to decades. These  
> include natural (internal atmosphere-ocean interactions)  
> variability, a small effect due to solar variability, emission of  
> atmospheric aerosols (dust particles and smoke, which actually cause  
> surface cooling; without them the warming would be greater) and  
> occasional volcanoes). It also shows that we should not be  
> surprised when one or two years are colder than the previous few  
> years, even in a world that is warming overall.

>  
> Slide 2, which shows a nearly monotonic mean global sea level rise,  
> is very compelling. Global mean sea level is a great integrator--it  
> doesn't "care" about a cold winter or two in the northeastern US or  
> Europe, a heavy snowfall in Washington DC, a hot summer in Kansas,  
> or hurricanes like Katrina. It occurs because of melting glaciers  
> (ice over land), and the thermal expansion of warming sea water. It  
> is also easier to measure now with satellites than the global mean  
> surface temperature.

>  
> Slide 3 shows that models with anthropogenic greenhouse gas forcing  
> and aerosols in the atmosphere can pretty well explain the observed  
> surface temperature trend and variability, providing strong  
> evidence confirming the hypothesis that greenhouse gas increases are  
> the main cause of global warming, but that other important things  
> are going on from one year or even decades to the next.

>  
> Rick

>  
> PS--thanks to Kevin for providing these slides.

> PPS--If I was restricted to only one slide and 3 minutes I would  
> probably choose Slide #2.

>  
> Challenges and proposals for alternate slides are welcome, but let's  
> not go over three!  
> Rick

>  
>  
>  
>  
> Paul Gross wrote:  
>> Hello Mark, et al,

>>  
>> I'd like to comment on this from the broadcast perspective. As a  
>> broadcast meteorologist (both a CCM and CBM) who does as much as  
>> possible to educate the public about global warming (including writing  
>> an entire chapter about this in my upcoming book about Michigan  
>> weather), I think I've heard enough of the public's thoughts on the  
>> matter to offer some suggestions.

>>  
>> First of all, as I believe I mentioned in a previous e-mail several  
>> months ago, we need to keep the focus on educating through science,  
>> rather than attacking the skeptics. Inflammatory language, and  
>> statements directed specifically at skeptics and their practices only  
>> cause them to dig their heels deeper and fight harder through personal  
>> attacks upon us scientists.

>>  
>> Your top-ten list should, in my opinion, focus on the ten most-cited  
>> points made by skeptics, and explain how rigorous science has  
>> emphatically proved them all wrong.

>>  
>> For example:

>>  
>> 1. Skeptics like to say that solar output changes are responsible for  
>> the warming. While this may have had a small impact 100 years ago, it  
>> has NOT been a factor during the unusual warming of the past several  
>> decades. This is agreed upon scientific fact.

>>  
>> 2. Skeptics like to say that the warming has stopped (since 1998,  
>> obviously), and the response to this point has already been discussed in  
>> some of our previous e-mails (plus, some recent global climate models  
>> actually predict 10-20 year flat periods...but the warming always  
>> resumes robustly). This is agreed upon scientific fact.

>>  
>> 3. Skeptics like to say that urbanization (urban sprawl) has increased  
>> the size of the urban heat island effect, and artificially skewed  
>> temperatures upward. The IPCC specifically researched this, and the  
>> globally averaged impact from urbanization is only 0.006 degrees  
>> Celsius. Another key point to remember is that ocean temperatures are  
>> rapidly increasing too...and there's no urban heat island effect over  
>> the oceans. This is agreed upon scientific fact.

>>  
>> 4. Skeptics like to say that this is just another one of Earth's  
>> cycles, and there have been comparable warm periods in the past. While  
>> it's true that we've been this warm before, those previous warm periods  
>> all started with changes in the Earth's axis or orbit, which initiated a  
>> warming that caused a massive GHG release, which then accelerated the  
>> warming. This time, however, there has been no change in Earth's axis  
>> or orbit whatsoever...the warming had to be initiated by something else.  
>> This is agreed upon scientific fact.

>>

>> 5. Skeptics like to say that our climate models are unreliable. I'd  
>> rather point out that a climate model is "tested" by seeing how well it  
>> "predicts" our current warming and, to date, there has not been one  
>> climate model...not one...that successfully replicates our current  
>> warming WITHOUT including the anthropogenic GHG component. And besides,  
>> one of the most agreed upon predictions by climate models was that  
>> higher latitudes would experience a greater climatic response to the  
>> increase in GHG...and this most indeed is occurring. This is agreed  
>> upon scientific fact.

>> 6. Skeptics like to say that we need more time for research...that  
>> nothing should be done until we're "sure" about this. I'd respond to  
>> this by saying that the minimum Arctic ice extent has been at and near  
>> record lows for each of the past three years. Climate models originally  
>> predicted this abrupt decline in Arctic ice to occur between 2020 And  
>> 2030, but we are quite possibly seeing it occurring now. Earth is now  
>> responding in other ways as well, such as documented thawing of  
>> permafrost that may release enormous additional GHG into the atmosphere  
>> and further accelerate the warming, and in well-documented species  
>> migration. Waiting means that Earth potentially passes critical,  
>> irreversable tipping points. This is agreed upon scientific fact.

>> 7. Skeptics like to paint a picture of discord among the scientific  
>> community. I'd respectfully counter with the fact that there is no  
>> schism among climate scientists worldwide...most are in agreement about  
>> the fact that we are warming at a highly unusual and unnatural rate, and  
>> the proximate cause is anthropogenic GHG. There will always be a few  
>> radicals with different ideas but, in the end, rigorous, debated science  
>> always wins out. The cigarette smoking issue cited in a previous e-mail  
>> is perfect to cite here. And don't forget to cite the 2008 survey  
>> released by the Statistical Assessment Service at George Mason  
>> University. Of the 489 Earth and atmospheric scientists surveyed by  
>> Harris Interactive, 97 percent said that global temperatures have  
>> increased during the past 100 years, and 74 percent agreed that  
>> "currently available scientific evidence substantiates the occurrence of  
>> human-induced greenhouse warming." The findings mark a significant  
>> increase in concern over climate change since 1991, when a Gallup survey  
>> of the same universe of scientists showed only 60 percent agreed that  
>> temperatures were up and 41 percent believed that evidence pointed to  
>> human activity as the cause. This is agreed upon scientific fact.

>> These are seven suggestions...I'm sure everybody can come up with three  
>> more. Remember that the public doesn't know the "inside baseball" about  
>> climate change. They have never heard about the Wegman report, and  
>> don't know who Fred Singer is, nor the Heartland Institute and Oregon  
>> Petition (perhaps they've heard of the petition). I would just focus on  
>> letting the skeptics deal with their rumors and inuendos, while we take  
>> the high road and respond with science. Over time, a mature message  
>> born of science, rather than personal attacks, will win.

>> These are my humble thoughts on the matter. Hope this helps,

>> Paul

>> -----Original Message-----

>> From: Boslough [<mailto:mbeb@unm.edu>]

>> Sent: Saturday, March 20, 2010 3:42 PM  
>> To: Boslough, Mark B  
>> Cc: Stephen H Schneider; <<mailto:trenbert@ucar.edu>>; Thomas  
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Graham'  
>> 'Bench; Pat Berge; George Boer; Celine J. W. Bonfils; James A.' 'Bono;  
>> James Boyle; Ray Bradley; Robin Bravender; Keith Briffa; Wolfgang  
>> Brueggemann; Lisa Butler; Ken Caldeira; Peter Caldwell; Dan Cayan; Peter  
>> U. Clark; Amy Clement; Nancy Cole; William Collins; Tina Conrad; Curtis  
>> Covey; birte dar; Davies Trevor Prof; Jay Davis; Tomas Diaz De La Rubia;  
>> Andrew Dessler; Michael' 'Dettinger; Phil Duffy; Paul J.' 'Ehlenbach;  
>> Kerry Emanuel; James Estes; Veronika' 'Eyring; David Fahey; Chris Field;  
>> Peter Foukal; Melissa Free; Julio Friedmann; Bill Fulkerson; Inez Fung;  
>> Jeff Garberson; PETER GENT; Nathan Gillett; peter gleckler; Bill  
>> Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold Haimberger;  
>> Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy Hassol;  
>> Gabi Hegerl; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr. Elisabeth A.  
>> Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell; Ken  
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>> jsanter; John Schellhuber; David Schimel; Michael Schlesinger; Gavin  
>> Schmidt; Christina L. Schomer; Lynda Seaver; Dian J. Seidel; Ted  
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>> 'Warrilow (GA)'; Warren Washington; Andrew Weaver; Michael Wehner; Frank  
>> Wentz; Penny' 'Whetton; Dean N. Williams; Gordon Yano; Francis W.  
>> Zwiers; Erik M' 'Conway; Sanjay Khanna; Graham Cogley; Jeffrey Kargel;  
>> W. Crawford Elliott; John Weyant; Anthony Janetos; Alison' 'Sowden;  
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>> <<mailto:Richard.Somerville@ucar.edu>> Cheryl\_H; Richard' 'Somerville; Martin Heimann;  
Don  
>> Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies; Pete Myers;  
>> Michael Oppenheimer; Tom Wigley; Naomi Oreskes  
>> Subject: Top Ten List of denialist misconduct  
>>  
>>

>>  
>> Folks, I'm preparing a presentation for next month's meeting of New  
>> Mexicans for Science and Reason. The title is "Hockey Stick Politics:  
>> Climategate or Clusterpuck?" (link:  
>> <http://www.nmsr.org/meetings.htm#latest>). I could use some help.  
>>  
>> One of my main goals is to demonstrate a pattern of mistakes,  
>> misrepresentation, misconduct, and outright fraud by denialists. I'm  
>> putting together a "Top Ten List" of the examples denialist wrongdoing  
>> that if had been done by mainstream scientists would have resulted in  
>> calls for firings or worse. The scientific community has not been  
>> willing  
>> to call out the denialists on this, presumably because we dont consider  
>> non-peer-reviewed literature to be worth criticizing. In our world, in  
>> which claims are debated in by the rules of science, that would be true.  
>>  
>> But In the world of climate politics, the non-peer-reviewed sources are  
>> given equal or greater weight by the public and by policy makers, and  
>> should therefore be a target of intense scientific criticism.  
>>  
>> Here's the start of my top-ten list. If a mainstream scientist were  
>> involved in anything close to one of the items on this list, it would be  
>>  
>> front-page news and wall-to-wall talk-show fodder, but denialists  
>> continue  
>> to get a free pass (implying that they are expected to lie and cheat).  
>>  
>> 1. Plagiarism and misrepresentations in the Wegman Report. At least  
>> three pages of Wegman were cribbed with only minor word changes from  
>> Bradley's textbook. Even the title of the Wegman Report misrepresents  
>> the  
>> MBH hockey stick as a global climate reconstruction. Imagine the media  
>> reaction if three pages of an IPCC publication were discovered to have  
>> been plagiarized.  
>>  
>> 2. Non-scientists impersonating scientists. The Oregon Petition  
>> contains many names of individuals who claim to be scientists, but who  
>> in  
>> fact are engineers, dentists, pharmacists, veterinarians, etc. It would  
>>  
>> be a considered an unethical or even criminal act for an unqualified  
>> person to masquerade as a member of one of those occupations and to give  
>>  
>> professional advice under that pretense. It seems that scientists are  
>> the  
>> only professionals expected to have the humility to allow others to  
>> practice their trade without any training or basic understanding.  
>>  
>> 3. Willful removal of uncertainty bands on the MBH hockey stick graph  
>>  
>> by Singer et al. in the Non-IPCC report, thereby misrepresenting its  
>> purported accuracy. Removing information from a graph when replotting  
>> it  
>> is unethical, especially when the information removed contradicts the  
>> point being made by the party who is criticizing the work.  
>>  
>> 4. Removal of data from the Sargasso Sea temperature history of  
>> Keigwin  
>> (1996) and replacement with a fabricated temperature by Robinson et al.  
>> (2007). Robinson also replotted Keigwin's data on a shifted time scale,

>>  
>> either out of ignorance or willful desire to misrepresent it. The  
>> sanitized and time-shifted Keigwin graph was reproduced in the Non-IPCC  
>> report and the fabricated data point was used to make the claim that  
>> temperatures were higher during the MWP.

>>  
>> 5. Jack Schmitt's claim in a 2009 white paper that Artic (sic) sea  
>> ice  
>> has returned to 1989 levels of coverage. (link:  
>> <http://www.lpi.usra.edu/decadal/leag/>). The fact that this is an  
>> obscure  
>> paper is irrelevant; Schmitt is associated with the Heartland Institute,  
>>  
>> and putting false statements into un-reviewed reports is a standard way  
>> of  
>> meme laundering (as John Mashey puts it). I wrote to Schmitt about this  
>>  
>> and sent him the NSIDC data, so he is aware that his claim has no  
>> factual  
>> basis. Nevertheless, he refuses to correct or withdraw the paper.

>>  
>> 6. The claim that it has been cooling since 1998. Im not sure who  
>> was  
>> the first to come up with this (Bob Carter?). We all know that this is  
>> climatologically meaningless and contrived to deceive, but  
>> non-scientists  
>> and gullible journalists think it is important. A statement that it has  
>>  
>> been warming since 19xx (where xx is any 2-digit number other than 98)  
>> is  
>> equally true. This kind of cherry picking would be considered  
>> criminally  
>> fraudulent if it were used to calculate returns on an investment and  
>> advertised that way.

>>  
>> 7. The claim that, because paleoclimate records show temperature  
>> increases lead CO2 concentration increases, then CO2 cannot cause  
>> temperatures to rise. Who was the first to make this claim, and why do  
>> intelligent people not recognize the obvious logical flaw? Any  
>> scientist  
>> who makes this argument either incompetent or is intentionally  
>> perpetrating fraud. We really need to figure out how to explain this to  
>>  
>> ordinary people (Richard Alley did it best at AGU, but he was talking  
>> to  
>> scientists).

>>  
>> If anyone has any comments, suggestions, or additions to my list,  
>> please let me know. I'm presenting this on April 14.

>>  
>> Thanks!

>>  
>> Mark Boslough

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**Subject:** RE: Top Ten List of denialist misconduct  
**Date:** Monday, March 22, 2010 3:20:32 PM

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This is outstanding, Rick and, speaking for those of us in the media, we can really use clear, simple visuals like this. In fact, I'm giving a talk this Sunday called "The Truth About Global Warming"...I'm going to use this (and the graph Curt sent me personally in a separate e-mail). If any of the rest of you have anything I can use to help communicate the science, please send it along!

Thanks!

Paul

-----Original Message-----

**From:** Rick Anthes [mailto:[anthes@ucar.edu](mailto:anthes@ucar.edu)]

**Sent:** Monday, March 22, 2010 3:38 PM

**To:** Paul Gross

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**Subject:** Re: Top Ten List of denialist misconduct

I like these simple statements countering common deniers' claims. The FAQ approach is also pretty effective. Anything that does not contain long paragraphs and many pages of text--we live in a sound-byte world.

In response to a colleague's question to me recently, "if I could only show one slide to demonstrate global warming and its main cause, what would that be?" I thought about this and discussed with Kevin Trenberth, and I came up with the attached three slides. The one my colleague wanted to use was the third one. I thought one slide might be too limiting and so I tried "three slides and ten minutes" to make the case. Here is what I came up with after looking at hundreds of slides:

### Three slides and Ten Minutes

If I had only three slides and ten minutes to convince a lay person that Earth is warming and that increasing greenhouse gases, notably carbon dioxide, was the primary cause of this warming, these three are the ones I would show. (View these slides in slide show mode.)

The first slide is observations only (mean global surface temperature and CO<sub>2</sub>). This suggests a correlation, though not perfect, of increasing CO<sub>2</sub> and temperature. The positive correlation is easily explained by basic physics--no complex models required. The fact that the temperature increase shows lots of variability from year to year and even decade to decade on top of the long-term trend says that other important processes and phenomena are occurring on time scales of years to decades. These include natural (internal atmosphere-ocean interactions) variability, a small effect due to solar variability, emission of atmospheric aerosols (dust particles and smoke, which actually cause surface cooling; without them the warming would be greater) and occasional volcanoes). It also shows that we should not be surprised when one or two years are colder than the previous few years, even in a world that is warming overall.

Slide 2, which shows a nearly monotonic mean global sea level rise, is very compelling. Global mean sea level is a great integrator--it doesn't "care" about a cold

winter or two in the northeastern US or Europe, a heavy snowfall in Washington DC, a hot summer in Kansas, or hurricanes like Katrina. It occurs because of melting glaciers (ice over land), and the thermal expansion of warming sea water. It is also easier to measure now with satellites than the global mean surface temperature.

Slide 3 shows that models with anthropogenic greenhouse gas forcing and aerosols in the atmosphere can pretty well explain the observed surface temperature trend and variability, providing strong evidence confirming the hypothesis that greenhouse gas increases are the main cause of global warming, but that other important things are going on from one year or even decades to the next.

Rick

PS--thanks to Kevin for providing these slides.

PPS--If I was restricted to only one slide and 3 minutes I would probably choose Slide #2.

Challenges and proposals for alternate slides are welcome, but let's not go over three!

Rick

Paul Gross wrote:

Hello Mark, et al,

I'd like to comment on this from the broadcast perspective. As a broadcast meteorologist (both a CCM and CBM) who does as much as possible to educate the public about global warming (including writing an entire chapter about this in my upcoming book about Michigan weather), I think I've heard enough of the public's thoughts on the matter to offer some suggestions.

First of all, as I believe I mentioned in a previous e-mail several months ago, we need to keep the focus on educating through science, rather than attacking the skeptics. Inflammatory language, and statements directed specifically at skeptics and their practices only cause them to dig their heels deeper and fight harder through personal attacks upon us scientists.

Your top-ten list should, in my opinion, focus on the ten most-cited points made by skeptics, and explain how rigorous science has emphatically proved them all wrong.

For example:

1. Skeptics like to say that solar output changes are responsible for the warming. While this may have had a small impact 100 years ago, it has NOT been a factor during the unusual warming of the past several decades. This is agreed upon scientific fact.

2. Skeptics like to say that the warming has stopped (since 1998, obviously), and the response to this point has already been discussed in some of our previous e-mails (plus, some recent global climate models actually predict 10-20 year flat periods...but the warming always resumes robustly). This is agreed upon scientific fact.

3. Skeptics like to say that urbanization (urban sprawl) has increased the size of the urban heat island effect, and artificially skewed temperatures upward. The IPCC specifically researched this, and the globally averaged impact from urbanization is only 0.006 degrees Celsius. Another key point to remember is that ocean temperatures are rapidly increasing too...and there's no urban heat island effect over the oceans. This is agreed upon scientific fact.

4. Skeptics like to say that this is just another one of Earth's cycles, and there have been comparable warm periods in the past. While it's true that we've been this warm before, those previous warm periods all started with changes in the Earth's axis or orbit, which initiated a warming that caused a massive GHG release, which then accelerated the warming. This time, however, there has been no change in Earth's axis or orbit whatsoever...the warming had to be initiated by something else. This is agreed upon scientific fact.

5. Skeptics like to say that our climate models are unreliable. I'd rather point out that a climate model is "tested" by seeing how well it "predicts" our current warming and, to date, there has not been one climate model...not one...that successfully replicates our current warming WITHOUT including the anthropogenic GHG component. And besides, one of the most agreed upon predictions by climate models was that higher latitudes would experience a greater climatic response to the increase in GHG...and this most indeed is occurring. This is agreed upon scientific fact.

6. Skeptics like to say that we need more time for research...that nothing should be done until we're "sure" about this. I'd respond to this by saying that the minimum Arctic ice extent has been at and near record lows for each of the past three years. Climate models originally predicted this abrupt decline in Arctic ice to occur between 2020 And 2030, but we are quite possibly seeing it occurring now. Earth is now responding in other ways as well, such as documented thawing of permafrost that may release enormous additional GHG into the atmosphere

and further accelerate the warming, and in well-documented species migration. Waiting means that Earth potentially passes critical, irreversible tipping points. This is agreed upon scientific fact.

7. Skeptics like to paint a picture of discord among the scientific community. I'd respectfully counter with the fact that there is no schism among climate scientists worldwide...most are in agreement about the fact that we are warming at a highly unusual and unnatural rate, and the proximate cause is anthropogenic GHG. There will always be a few radicals with different ideas but, in the end, rigorous, debated science always wins out. The cigarette smoking issue cited in a previous e-mail is perfect to cite here. And don't forget to cite the 2008 survey released by the Statistical Assessment Service at George Mason University. Of the 489 Earth and atmospheric scientists surveyed by Harris Interactive, 97 percent said that global temperatures have increased during the past 100 years, and 74 percent agreed that "currently available scientific evidence substantiates the occurrence of human-induced greenhouse warming." The findings mark a significant increase in concern over climate change since 1991, when a Gallup survey of the same universe of scientists showed only 60 percent agreed that temperatures were up and 41 percent believed that evidence pointed to human activity as the cause. This is agreed upon scientific fact.

These are seven suggestions...I'm sure everybody can come up with three more. Remember that the public doesn't know the "inside baseball" about climate change. They have never heard about the Wegman report, and don't know who Fred Singer is, nor the Heartland Institute and Oregon Petition (perhaps they've heard of the petition). I would just focus on letting the skeptics deal with their rumors and inuendos, while we take the high road and respond with science. Over time, a mature message born of science, rather than personal attacks, will win.

These are my humble thoughts on the matter. Hope this helps,  
Paul

-----Original Message-----

From: Boslough [<mailto:mbeb@unm.edu>]

Sent: Saturday, March 20, 2010 3:42 PM

To: Boslough, Mark B

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A.' 'Bono;  
James Boyle; Ray Bradley; Robin Bravender; Keith Briffa;  
Wolfgang  
Brueggemann; Lisa Butler; Ken Caldeira; Peter Caldwell; Dan  
Cayan; Peter  
U. Clark; Amy Clement; Nancy Cole; William Collins; Tina  
Conrad; Curtis  
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Andrew Dessler; Michael' 'Dettinger; Phil Duffy; Paul J.'  
'Ehlenbach;  
Kerry Emanuel; James Estes; Veronika' 'Eyring; David Fahey;  
Chris Field;  
Peter Foukal; Melissa Free; Julio Friedmann; Bill Fulkerson;  
Inez Fung;  
Jeff Garber; PETER GENT; Nathan Gillett; peter gleckler;  
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Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold  
Haimberger;  
Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy  
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Gabi Hegerl; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr.  
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Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell;  
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Schlesinger; Gavin  
Schmidt; Christina L. Schomer; Lynda Seaver; Dian J. Seidel;  
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Wehner; Frank  
Wentz; Penny' 'Whetton; Dean N. Williams; Gordon Yano;  
Francis W.  
Zwiers; Erik M' 'Conway; Sanjay Khanna; Graham Cogley;  
Jeffrey Kargel;  
W. Crawford Elliott; John Weyant; Anthony Janetos; Alison'  
'Sowden;  
Vernon Squire; Eric Garen; Peter Cross; Charles Zeller; Ian

Murdock;  
Victoria A Arroyo; Rashida Leonard; Stephanie Fontenoy; John  
Collee;  
Sarah-jane Potts; Greg Dutton; Richard B.  
Rood;  
k Seeley; Oliver Morton;  
Cheryl\_H; Richard 'Some

Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies; Pete  
Myers;  
Michael Oppenheimer; Tom Wigley; Naomi Oreskes  
Subject: Top Ten List of denialist misconduct

Folks, I'm preparing a presentation for next month's meeting  
of New  
Mexicans for Science and Reason. The title is "Hockey Stick  
Politics:  
Climategate or Clusterpuck?" (link:  
<http://www.nmsr.org/meetings.htm#latest>). I could use some  
help.

One of my main goals is to demonstrate a pattern of  
mistakes,  
misrepresentation, misconduct, and outright fraud by  
denialists. I'm  
putting together a "Top Ten List" of the examples denialist  
wrongdoing  
that if had been done by mainstream scientists would have  
resulted in  
calls for firings or worse. The scientific community has not  
been  
willing  
to call out the denialists on this, presumably because we  
dont consider  
non-peer-reviewed literature to be worth criticizing. In our  
world, in  
which claims are debated in by the rules of science, that  
would be true.

But In the world of climate politics, the non-peer-reviewed  
sources are  
given equal or greater weight by the public and by policy  
makers, and  
should therefore be a target of intense scientific criticism.

Here's the start of my top-ten list. If a mainstream  
scientist were  
involved in anything close to one of the items on this list,  
it would be

front-page news and wall-to-wall talk-show fodder, but  
denialists  
continue  
to get a free pass (implying that they are expected to lie  
and cheat).

1. Plagiarism and misrepresentations in the Wegman Report.  
At least  
three pages of Wegman were cribbed with only minor word  
changes from  
Bradley's textbook. Even the title of the Wegman Report  
misrepresents  
the  
MBH hockey stick as a global climate reconstruction. Imagine  
the media  
reaction if three pages of an IPCC publication were  
discovered to have  
been plagiarized.

2. Non-scientists impersonating scientists. The Oregon  
Petition  
contains many names of individuals who claim to be  
scientists, but who

in fact are engineers, dentists, pharmacists, veterinarians, etc. It would

be considered an unethical or even criminal act for an unqualified person to masquerade as a member of one of those occupations and to give

professional advice under that pretense. It seems that scientists are the only professionals expected to have the humility to allow others to practice their trade without any training or basic understanding.

3. Willful removal of uncertainty bands on the MBH hockey stick graph

by Singer et al. in the Non-IPCC report, thereby misrepresenting its purported accuracy. Removing information from a graph when replotting it is unethical, especially when the information removed contradicts the point being made by the party who is criticizing the work.

4. Removal of data from the Sargasso Sea temperature history of Keigwin (1996) and replacement with a fabricated temperature by Robinson et al. (2007). Robinson also replotted Keigwin's data on a shifted time scale,

either out of ignorance or willful desire to misrepresent it. The sanitized and time-shifted Keigwin graph was reproduced in the Non-IPCC report and the fabricated data point was used to make the claim that temperatures were higher during the MWP.

5. Jack Schmitt's claim in a 2009 white paper that Arctic (sic) sea ice has returned to 1989 levels of coverage. (link: <http://www.lpi.usra.edu/decadal/leag/>). The fact that this is an obscure paper is irrelevant; Schmitt is associated with the Heartland Institute,

and putting false statements into un-reviewed reports is a standard way of meme laundering (as John Mashey puts it). I wrote to Schmitt about this

and sent him the NSIDC data, so he is aware that his claim has no factual basis. Nevertheless, he refuses to correct or withdraw the paper.

6. The claim that it has been cooling since 1998. I'm not sure who was the first to come up with this (Bob Carter?). We all know that this is climatologically meaningless and contrived to deceive, but non-scientists and gullible journalists think it is important. A statement

that it has

been warming since 19xx (where xx is any 2-digit number other than 98) is equally true. This kind of cherry picking would be considered criminally fraudulent if it were used to calculate returns on an investment and advertised that way.

7. The claim that, because paleoclimate records show temperature increases lead CO2 concentration increases, then CO2 cannot cause temperatures to rise. Who was the first to make this claim, and why do intelligent people not recognize the obvious logical flaw? Any scientist who makes this argument either incompetent or is intentionally perpetrating fraud. We really need to figure out how to explain this to

ordinary people (Richard Alley did it best at AGU, but he was talking to scientists).

If anyone has any comments, suggestions, or additions to my list, please let me know. I'm presenting this on April 14.

Thanks!

Mark Boslough

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\*\*\*\*\*

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**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Monday, March 22, 2010 2:39:07 PM  
**Attachments:** [Just three slides.pptx](#)

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### Three slides and Ten Minutes

If I had only three slides and ten minutes to convince a lay person that Earth is warming and that increasing greenhouse gases, notably carbon dioxide, was the primary cause of this warming, these three are the ones I would show. (View these slides in slide show mode.)

The first slide is observations only (mean global surface temperature and CO<sub>2</sub>). This suggests a correlation, though not perfect, of increasing CO<sub>2</sub> and temperature. The positive correlation is easily explained by basic physics--no complex models required. The fact that the temperature increase shows lots of variability from year to year and even decade to decade on top of the long-term trend says that other important processes and phenomena are occurring on time scales of years to decades. These include natural (internal atmosphere-ocean interactions) variability, a small effect due to solar variability, emission of atmospheric

aerosols (dust particles and smoke, which actually cause surface cooling; without them the warming would be greater) and occasional volcanoes). It also shows that we should not be surprised when one or two years are colder than the previous few years, even in a world that is warming overall.

Slide 2, which shows a nearly monotonic mean global sea level rise, is very compelling. Global mean sea level is a great integrator--it doesn't "care" about a cold winter or two in the northeastern US or Europe, a heavy snowfall in Washington DC, a hot summer in Kansas, or hurricanes like Katrina. It occurs because of melting glaciers (ice over land), and the thermal expansion of warming sea water. It is also easier to measure now with satellites than the global mean surface temperature.

Slide 3 shows that models with anthropogenic greenhouse gas forcing and aerosols in the atmosphere can pretty well explain the observed surface temperature trend and variability, providing strong evidence confirming the hypothesis that greenhouse gas increases are the main cause of global warming, but that other important things are going on from one year or even decades to the next.

Rick

PS--thanks to Kevin for providing these slides.

PPS--If I was restricted to only one slide and 3 minutes I would probably choose Slide #2.

Challenges and proposals for alternate slides are welcome, but let's not go over three!

Rick

Paul Gross wrote:

Hello Mark, et al,

I'd like to comment on this from the broadcast perspective. As a broadcast meteorologist (both a CCM and CBM) who does as much as possible to educate the public about global warming (including writing an entire chapter about this in my upcoming book about Michigan weather), I think I've heard enough of the public's thoughts on the matter to offer some suggestions.

First of all, as I believe I mentioned in a previous e-mail several months ago, we need to keep the focus on educating through science, rather than attacking the skeptics. Inflammatory language, and statements directed specifically at skeptics and their practices only cause them to dig their heels deeper and fight harder through personal attacks upon us scientists.

Your top-ten list should, in my opinion, focus on the ten most-cited points made by skeptics, and explain how rigorous science has emphatically proved them all wrong.

For example:

1. Skeptics like to say that solar output changes are responsible

for the warming. While this may have had a small impact 100 years ago, it has NOT been a factor during the unusual warming of the past several decades. This is agreed upon scientific fact.

2. Skeptics like to say that the warming has stopped (since 1998, obviously), and the response to this point has already been discussed in some of our previous e-mails (plus, some recent global climate models actually predict 10-20 year flat periods...but the warming always resumes robustly). This is agreed upon scientific fact.

3. Skeptics like to say that urbanization (urban sprawl) has increased the size of the urban heat island effect, and artificially skewed temperatures upward. The IPCC specifically researched this, and the globally averaged impact from urbanization is only 0.006 degrees Celsius. Another key point to remember is that ocean temperatures are rapidly increasing too...and there's no urban heat island effect over the oceans. This is agreed upon scientific fact.

4. Skeptics like to say that this is just another one of Earth's cycles, and there have been comparable warm periods in the past. While it's true that we've been this warm before, those previous warm periods all started with changes in the Earth's axis or orbit, which initiated a warming that caused a massive GHG release, which then accelerated the warming. This time, however, there has been no change in Earth's axis or orbit whatsoever...the warming had to be initiated by something else. This is agreed upon scientific fact.

5. Skeptics like to say that our climate models are unreliable. I'd rather point out that a climate model is "tested" by seeing how well it "predicts" our current warming and, to date, there has not been one climate model...not one...that successfully replicates our current warming WITHOUT including the anthropogenic GHG component. And besides, one of the most agreed upon predictions by climate models was that higher latitudes would experience a greater climatic response to the increase in GHG...and this most indeed is occurring. This is agreed upon scientific fact.

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7. Skeptics like to paint a picture of discord among the scientific community. I'd respectfully counter with the fact that there is no schism among climate scientists worldwide...most are in agreement about the fact that we are warming at a highly unusual and unnatural rate, and the proximate cause is anthropogenic GHG. There will always be a few radicals with different ideas but, in the end, rigorous, debated science always wins out. The cigarette smoking issue cited in a previous e-mail is perfect to cite here. And don't forget to cite the 2008 survey released by the Statistical Assessment Service at George Mason University. Of the 489 Earth and atmospheric scientists surveyed by Harris Interactive, 97 percent said that global temperatures have increased during the past 100 years, and 74 percent agreed that "currently available scientific evidence substantiates the occurrence of human-induced greenhouse warming." The findings mark a significant increase in concern over climate change since 1991, when a Gallup survey of the same universe of scientists showed only 60 percent agreed that temperatures were up and 41 percent believed that evidence pointed to human activity as the cause. This is agreed upon scientific fact.

These are seven suggestions...I'm sure everybody can come up with three more. Remember that the public doesn't know the "inside baseball" about climate change. They have never heard about the Wegman report, and don't know who Fred Singer is, nor the Heartland Institute and Oregon Petition (perhaps they've heard of the petition). I would just focus on letting the skeptics deal with their rumors and inuendos, while we take the high road and respond with science. Over time, a mature message born of science, rather than personal attacks, will win.

These are my humble thoughts on the matter. Hope this helps,  
Paul

-----Original Message-----

From: Boslough [<mailto:mbeb@unm.edu>]  
Sent: Saturday, March 20, 2010 3:42 PM  
To: Boslough, Mark B  
Cc: Stephen H Schneider; [trenbert@ucar.edu](mailto:trenbert@ucar.edu);  
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Crowley; [santer1@llnl.gov](mailto:santer1@llnl.gov); Dr. Krishna AchutaRao; Myles Allen;  
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nson; Rick Anthes; Caspar Ammann;  
David C. Bader; Tim Barnett; Eric Barron;

'Bench; Pat Berge; George Boer; Celine J. W. Bonfils; James A.'  
'Bono;  
James Boyle; Ray Bradley; Robin Bravender; Keith Briffa; Wolfgang  
Brueggemann; Lisa Butler; Ken Caldeira; Peter Caldwell; Dan Cayan;  
Peter  
U. Clark; Amy Clement; Nancy Cole; William Collins; Tina Conrad;  
Curtis  
Covey; birte dar; Davies Trevor Prof; Jay Davis; Tomas Diaz De La  
Rubia;

Andrew Dessler; Michael 'Dettinger; Phil Duffy; Paul J.'  
'Ehlenbach;  
Kerry Emanuel; James Estes; Veronika 'Eyring; David Fahey; Chris  
Field;  
Peter Foukal; Melissa Free; Julio Friedmann; Bill Fulkerson; Inez  
Fung;  
Jeff Garberson; PETER GENT; Nathan Gillett; peter gleckler; Bill  
Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold  
Haimberger;  
Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy  
Hassol;  
Gabi Hegerl; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr.  
Elisabeth A.  
Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell; Ken  
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jsanter; John Schellnhuber; David Schimel; Michael Schlesinger;  
Gavin  
Schmidt; Christina L. Schomer; Lynda Seaver; Dian J. Seidel; Ted  
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Thompson; ELLEN THOMPSON; Peter' 'Thorne; Mike Wallace; Bud Ward;  
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'Warrilow (GA)'; Warren Washington; Andrew Weaver; Michael Wehner;  
Frank  
Wentz; Penny' 'Whetton; Dean N. Williams; Gordon Yano; Francis W.  
Zwiers; Erik M' 'Conway; Sanjay Khanna; Graham Cogley; Jeffrey  
Kargel;  
W. Crawford Elliott; John Weyant; Anthony Janetos; Alison'  
'Sowden;  
Vernon Squire; Eric Garen; Peter Cross; Charles Zeller; Ian  
Murdock;  
Victoria A Arroyo; Rashida Leonard; Stephanie Fontenoy; John  
Collee;  
Sarah-jane Potts; Greg Dutton; Richard B.  
Rood;  
k Seeley; Oliver Morton;  
Cheryl\_H; Richard' 'Some mann;

Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies; Pete Myers;  
Michael Oppenheimer; Tom Wigley; Naomi Oreskes  
Subject: Top Ten List of denialist misconduct

Folks, I'm preparing a presentation for next month's meeting of  
New  
Mexicans for Science and Reason. The title is "Hockey Stick  
Politics:  
Climategate or Clusterpuck?" (link:  
<http://www.nmsr.org/meetings.htm#latest>). I could use some help.

One of my main goals is to demonstrate a pattern of mistakes,  
misrepresentation, misconduct, and outright fraud by denialists.  
I'm

putting together a "Top Ten List" of the examples denialist wrongdoing that if had been done by mainstream scientists would have resulted in calls for firings or worse. The scientific community has not been willing to call out the denialists on this, presumably because we dont consider non-peer-reviewed literature to be worth criticizing. In our world, in which claims are debated in by the rules of science, that would be true.

But In the world of climate politics, the non-peer-reviewed sources are given equal or greater weight by the public and by policy makers, and should therefore be a target of intense scientific criticism.

Here's the start of my top-ten list. If a mainstream scientist were involved in anything close to one of the items on this list, it would be

front-page news and wall-to-wall talk-show fodder, but denialists continue to get a free pass (implying that they are expected to lie and cheat).

1. Plagiarism and misrepresentations in the Wegman Report. At least three pages of Wegman were cribbed with only minor word changes from Bradley's textbook. Even the title of the Wegman Report misrepresents the MBH hockey stick as a global climate reconstruction. Imagine the media reaction if three pages of an IPCC publication were discovered to have been plagiarized.

2. Non-scientists impersonating scientists. The Oregon Petition contains many names of individuals who claim to be scientists, but who in fact are engineers, dentists, pharmacists, veterinarians, etc. It would

be a considered an unethical or even criminal act for an unqualified person to masquerade as a member of one of those occupations and to give

professional advice under that pretense. It seems that scientists are the only professionals expected to have the humility to allow others to practice their trade without any training or basic understanding.

3. Willful removal of uncertainty bands on the MBH hockey stick graph

by Singer et al. in the Non-IPCC report, thereby misrepresenting its purported accuracy. Removing information from a graph when replotting it is unethical, especially when the information removed contradicts the point being made by the party who is criticizing the work.

4. Removal of data from the Sargasso Sea temperature history of Keigwin

(1996) and replacement with a fabricated temperature by Robinson et al. (2007). Robinson also replotted Keigwin's data on a shifted time scale,

either out of ignorance or willful desire to misrepresent it. The sanitized and time-shifted Keigwin graph was reproduced in the Non-IPCC report and the fabricated data point was used to make the claim that temperatures were higher during the MWP.

5. Jack Schmitt's claim in a 2009 white paper that Arctic (sic) sea ice has returned to 1989 levels of coverage. (link: <http://www.lpi.usra.edu/decadal/leag/>). The fact that this is an obscure paper is irrelevant; Schmitt is associated with the Heartland Institute,

and putting false statements into un-reviewed reports is a standard way of meme laundering (as John Mashey puts it). I wrote to Schmitt about this

and sent him the NSIDC data, so he is aware that his claim has no factual basis. Nevertheless, he refuses to correct or withdraw the paper.

6. The claim that it has been cooling since 1998. Im not sure who was the first to come up with this (Bob Carter?). We all know that this is climatologically meaningless and contrived to deceive, but non-scientists and gullible journalists think it is important. A statement that it has

been warming since 19xx (where xx is any 2-digit number other than 98) is equally true. This kind of cherry picking would be considered criminally fraudulent if it were used to calculate returns on an investment and advertised that way.

7. The claim that, because paleoclimate records show temperature increases lead CO2 concentration increases, then CO2 cannot cause temperatures to rise. Who was the first to make this claim, and why do intelligent people not recognize the obvious logical flaw? Any scientist who makes this argument either incompetent or is intentionally perpetrating fraud. We really need to figure out how to explain this to

ordinary people (Richard Alley did it best at AGU, but he was talking to scientists).

If anyone has any comments, suggestions, or additions to my list, please let me know. I'm presenting this on April 14.

Thanks!

Mark Boslough

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Dr.Richard A. Anthes  
Phone: 303-497-1652

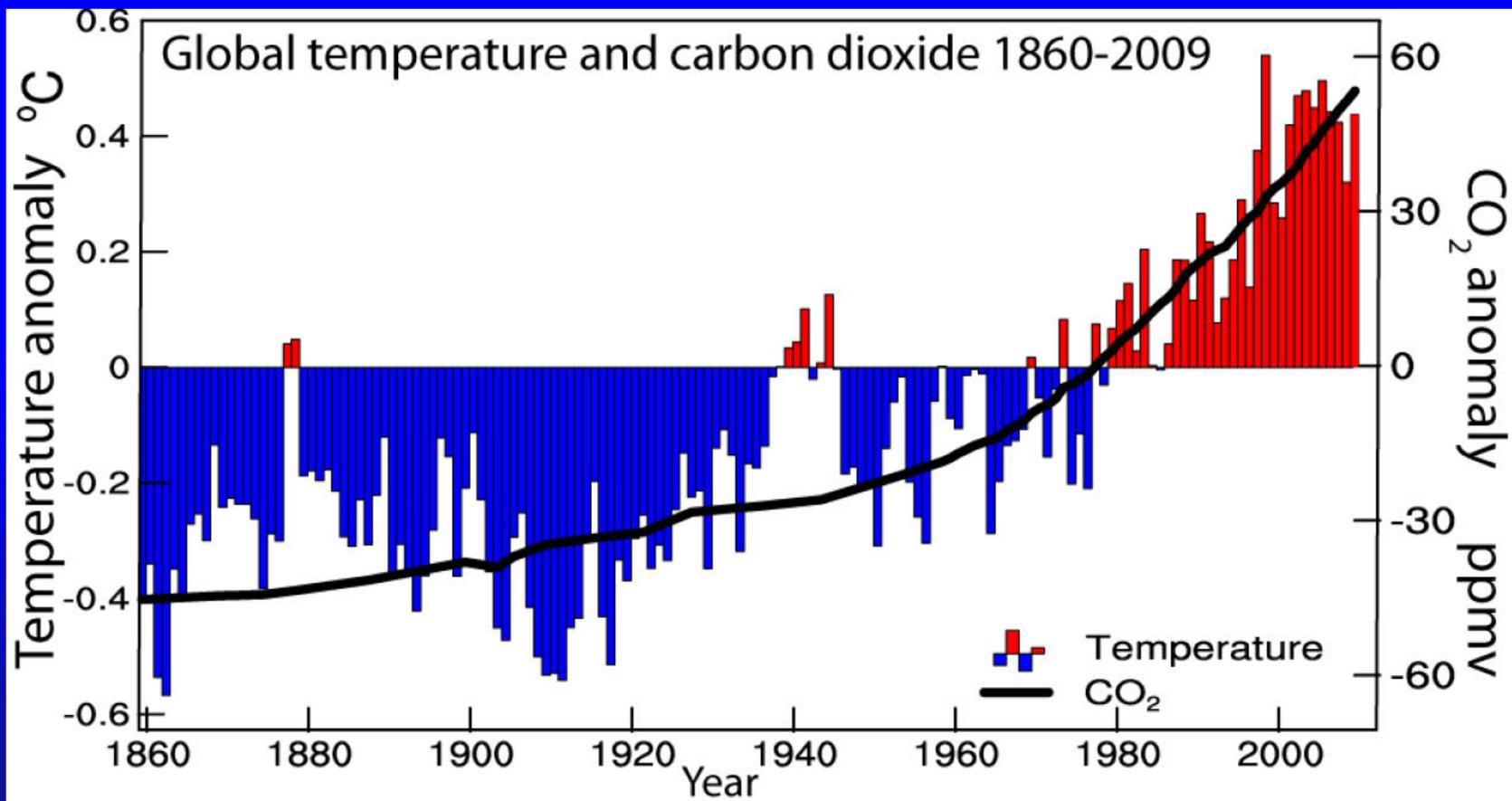
President  
University Corporation for Atmospheric Research  
P.O. Box 3000  
Boulder, CO 80307-3000

For delivery via express mail, please use:

1850 Table Mesa Drive  
Boulder, CO 80305

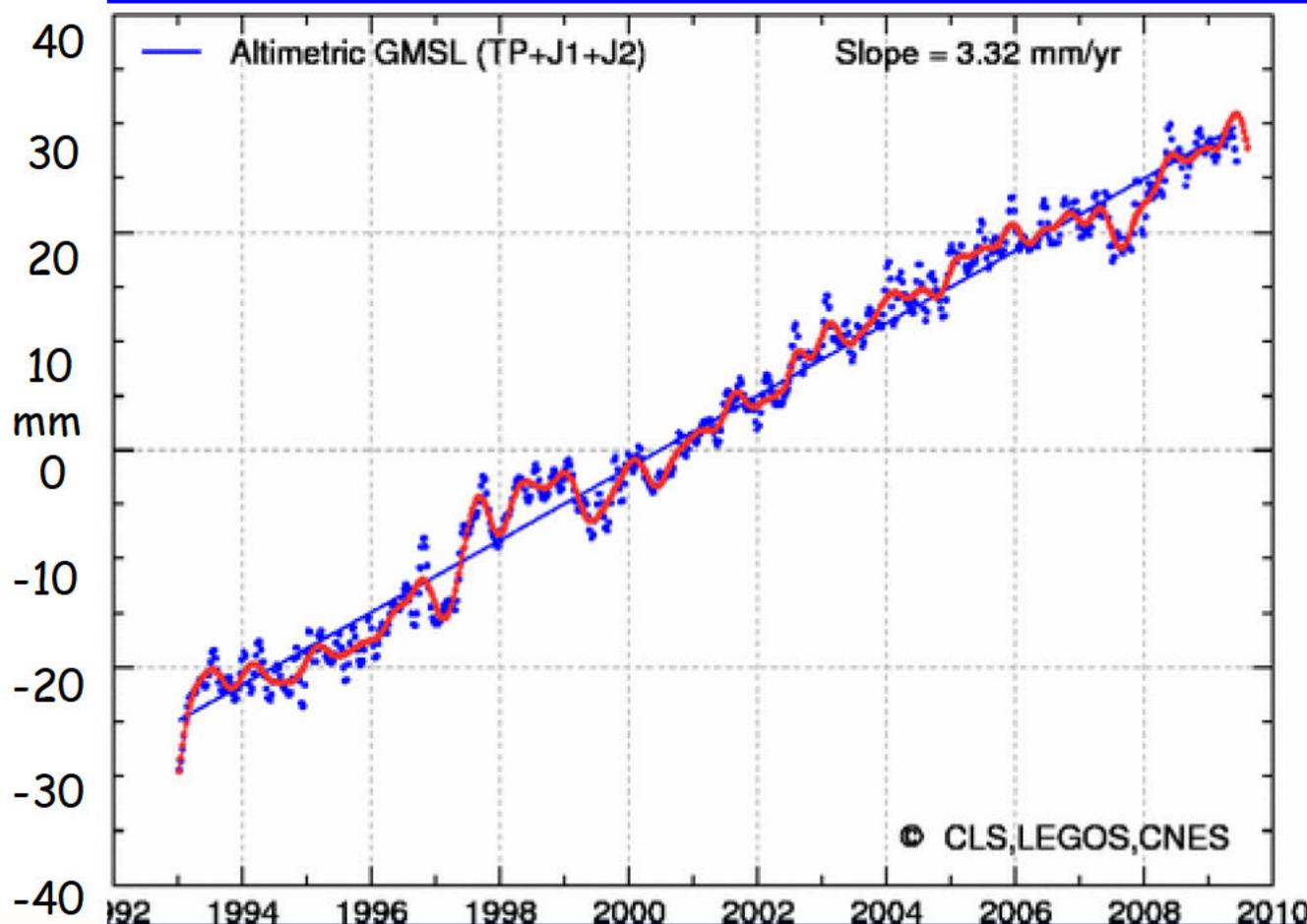
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# Global temperatures and carbon dioxide through 2009



Base period 1961-90

# Sea level is rising: from ocean expansion and melting glaciers



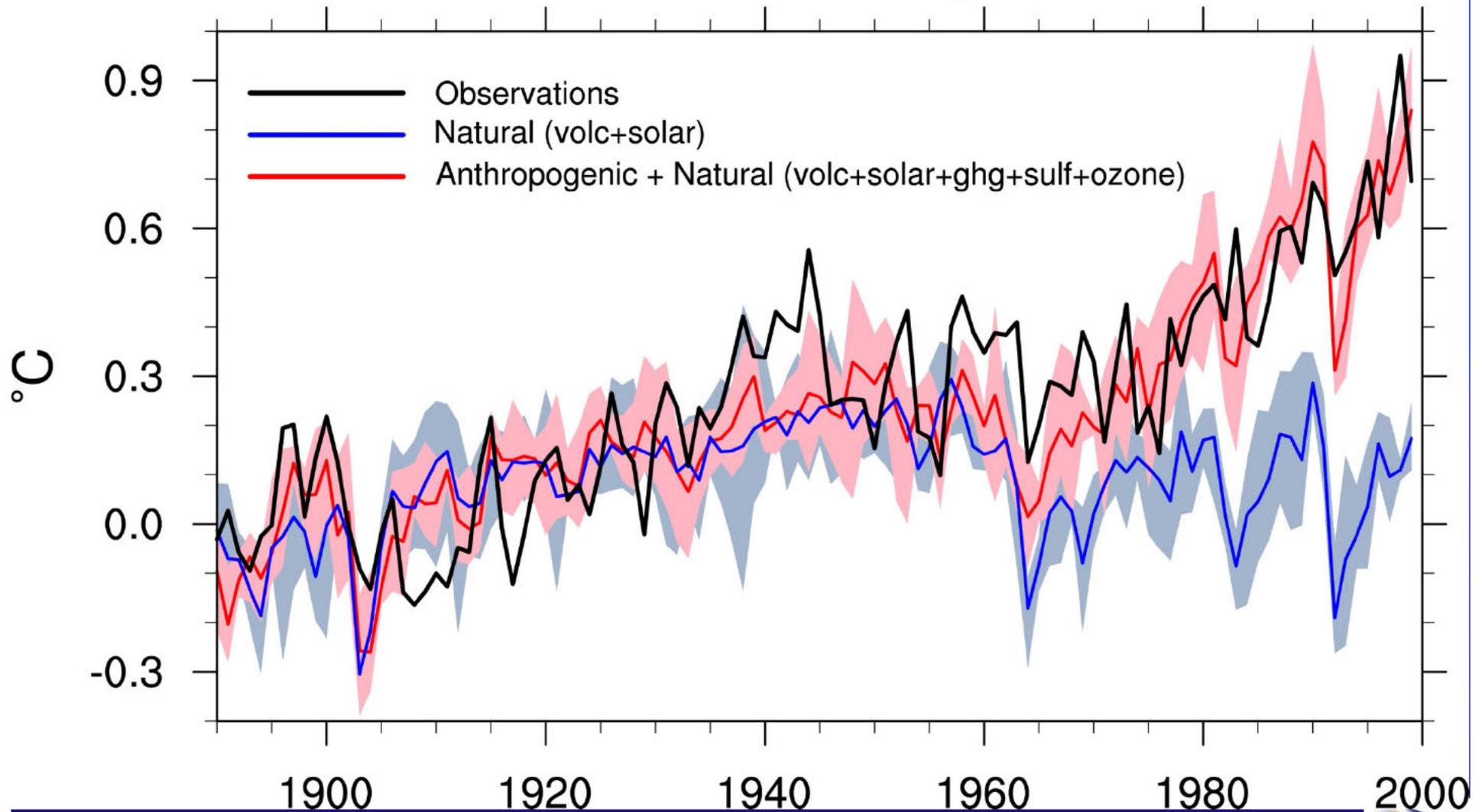
Since 1992 Global sea level has risen 55 mm (2.2 inches)

To 2003: 60% from expansion as ocean temperatures rise, 40% from melting glaciers

AVISO: from TOPEX, Jason 1, Jason 2. Ann cy removed, IB, GIA applied

# Natural forcings do not account for observed 20th century warming after 1970

Global Temperature Anomalies  
from 1890-1919 average



**From:** [Paul Gross](#)  
**To:** [Boslough](#); [Boslough, Mark B](#)  
**Cc:** [Stephen H Schneider](#); [trenbert@ucar.edu](#); [Thomas Crowley](#); [santer1@llnl.gov](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham "Bench" Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A. "Bono" James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Michael "Dettinger" Phil Duffy](#); [Paul J. "Ehlenbach" Kerry Emanuel](#); [James Estes](#); [Veronika "Eyring" David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENTI](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c jakob](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Steven A. "Lloyd \(GSFC-610.2\)JR S INFORMATION SYSTEMS INC"](#); [Jane Long](#); [Janice Lough](#); [mann](#); [emaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [John FB "Mitchell" Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Stu "Ostro" j palutikof](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Veerabhadran "Ramanathan" Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Robert "Sausen, DLR" jsanter](#); [John Schellnhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s sherwood](#); [Adrian Simmons](#); [socc anthony](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Joao P "Teixeira" Simon Tett](#); [Thomas A. "Tombrello" David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Peter "Thorne" Mike Wallace](#); [Bud Ward](#); [David "Warrilow \(GA\)" Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Penny "Whetton" Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Erik M "Conway" Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Alison "Sowden" Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard "Somerville" Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#); [Tom Wigley](#); [Naomi Oreskes](#)  
**Subject:** RE: Top Ten List of denialist misconduct  
**Date:** Monday, March 22, 2010 12:27:07 PM

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Hello Mark, et al,

I'd like to comment on this from the broadcast perspective. As a broadcast meteorologist (both a CCM and CBM) who does as much as possible to educate the public about global warming (including writing an entire chapter about this in my upcoming book about Michigan weather), I think I've heard enough of the public's thoughts on the matter to offer some suggestions.

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Sent: Saturday, March 20, 2010 3:42 PM

To: Boslough, Mark B

Cc: Stephen H Schneider; [trenbert@ucar.edu](mailto:trenbert@ucar.edu); Thomas Crowley; [santer1@llnl.gov](mailto:santer1@llnl.gov); Dr. Krishna AchutaRao; Myles Allen; Natalia Andronova; Tim C Atkinson; Rick Anthes; Caspar Ammann;

David C. Bader; Tim Barnett; Eric Barron; Graham 'Bench'; Pat Berge; George Boer; Celine J. W. Bonfils; James A. 'Bono'; James Boyle; Ray Bradley; Robin Bravender; Keith Briffa; Wolfgang Brueggemann; Lisa Butler; Ken Caldeira; Peter Caldwell; Dan Cayan; Peter U. Clark; Amy Clement; Nancy Cole; William Collins; Tina Conrad; Curtis Covey; birte dar; Davies Trevor Prof; Jay Davis; Tomas Diaz De La Rubia; Andrew Dessler; Michael 'Dettinger'; Phil Duffy; Paul J. 'Ehlenbach'; Kerry Emanuel; James Estes; Veronika 'Eyring'; David Fahey; Chris Field; Peter Foukal; Melissa Free; Julio Friedmann; Bill Fulkerson; Inez Fung; Jeff Garberson; PETER GENT; Nathan Gillett; peter gleckler; Bill Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold Haimberger; Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy Hassol; Gabi Hegerl; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr. Elisabeth A. Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell; Ken Jackson; c jakob; Gardar Johannesson; Philip D. Jones; Helen Kang; Thomas R Karl; David Karoly; Jeffrey Kiehl; Steve Klein; Knutti Reto; John Lanzante; [wily@ucar.edu](mailto:wily@ucar.edu); Ron Lehman; John lewis; Steven A. 'Lloyd (GSFC-610.2)[R S INFORMATION SYSTEMS INC]'; Jane Long; Janice Lough; [mann; emaurer@scu.edu](mailto:emaurer@scu.edu); Linda Mearns; carl mearns; Jerry Meehl; Jerry Melillo; George Miller; Norman Miller; Art Mirin; John FB 'Mitchell; Phil Mote; Neville Nicholls; Gerald R. North; Astrid E.J. Ogilvie; Stephanie Ohshita; Tim Osborn; Stu 'Ostro; j palutikof; Joyce Penner; Thomas C Peterson; Tom Phillips; David Pierce; [plattner@ipcc.unibe.ch](mailto:plattner@ipcc.unibe.ch); V. Ramaswamy; Veerabhadran 'Ramanathan; Sarah Raper; Phil Rasch; Kathryn Rauhut; Doug Rotman; Terry L. Root; Robert 'Sausen, DLR'; jsanter; John Schellhuber; David Schimel; Michael Schlesinger; Gavin Schmidt; Christina L. Schomer; Lynda Seaver; Dian J. Seidel; Ted Sheppard; s sherwood; Adrian Simmons; socci anthony; brian soden; Susan Solomon; Ken Sperber; Anne Stark; Thomas Stocker; Ronald J Stouffer; [tswetnam@ltrr.arizona.edu](mailto:tswetnam@ltrr.arizona.edu); Karl Taylor; claudia tebaldi; Joao P 'Teixeira; Simon Tett; Thomas A. 'Tombrello; David Thompson; Lonnie Thompson; ELLEN THOMPSON; Peter 'Thorne; Mike Wallace; Bud Ward; David 'Warrilow (GA)'; Warren Washington; Andrew Weaver; Michael Wehner; Frank

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Subject: Top Ten List of denialist misconduct

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Here's the start of my top-ten list. If a mainstream scientist were involved in anything close to one of the items on this list, it would be

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If anyone has any comments, suggestions, or additions to my list, please let me know. I'm presenting this on April 14.

Thanks!

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**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Monday, March 22, 2010 12:26:23 PM

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Dear Mark,

I think that the erroneous statistical test used by Professor David Douglass and colleagues in the 2008 Douglass et al. International Journal of Climatology (IJoC) paper is very deserving of inclusion on your "Top Ten List".

Application of a flawed "robust statistical test" allowed Douglass et al. to reach the incorrect conclusion that observed tropical temperature trends are fundamentally inconsistent with the trends simulated by all climate models. This incorrect conclusion was then disseminated and amplified by Fox News, the Heartland Institute, Fred Singer's "NIPCC Report", etc.

Full details of the statistical errors in the Douglass et al. IJoC paper are given in one of my previous "Open Letters".

It is particularly troubling that Douglass et al. have failed to retract their IJoC paper, or even to publicly acknowledge the existence of errors in their method of testing the statistical significance of differences between modeled and observed tropical temperature trends.

Despite the extraordinary (and incorrect) public claims made on the basis of the Douglass et al. paper (for example, Fred Singer has used the paper's findings to claim that "Nature, Not Humans, Rules the Climate"), the story of how this seriously-flawed paper was published has received no media scrutiny. This asymmetry is rather ironic. Serious scientific errors by Douglass et al. are ignored. Spurious claims of

flawed research by "IPCC scientists" are headline news.

With best regards,

Ben

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**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Monday, March 22, 2010 11:03:33 AM

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mark...you and others, if not aware of it already, ought to check out the two books by ross gelbspan in the 1990s for a then current expose of how the skeptics do business. even better, check out 'exxonsecrets.org'. this is a greenpeace funded operation. it is essentially a skeptics organizational chart. you can construct wiring diagrams for any person/business/front and even follow the money. i often show the wiring diagrams in public talks and the response from the audience is rewarding...they realize they are being duped by complex multi nationals. good luck, tim

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- > ordinary people (Richard Alley did it best at AGU, but he was talking to

> scientists).  
>  
> If anyone has any comments, suggestions, or additions to my list,  
> please let me know. I'm presenting this on April 14.  
>  
> Thanks!  
>  
> Mark Boslough  
>  
>  
>  
>  
>

**From:** [Tim Osborn](#)  
**To:** [Boslough](#)  
**Cc:** [Stephen H Schneider](#); [trenbert@ucar.edu](#); [Thomas Crowley](#); [santer1@lnl.gov](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham "Bench" Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A. "Bono" James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Michael "Dettinger" Phil Duffy](#); [Paul J. "Ehlenbach" Kerry Emanuel](#); [James Estes](#); [Veronika "Eyring" David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c jakob](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Steven A. "Lloyd \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]" Jane Long](#); [Janice Lough](#); [mann](#); [emaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [John FB "Mitchell" Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Stu" "Ostro" j palutikof](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Veerabhadran" Ramanathan](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Robert "Sausen, DLR" jsanter](#); [John Schellnhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s sherwood](#); [Adrian Simmons](#); [socc anthony](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Joao P" "Teixeira" Simon Tett](#); [Thomas A." "Tombrello" David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Peter" "Thorne" Mike Wallace](#); [Bud Ward](#); [David "Warrilow \(GA\)" Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Penny" "Whetton" Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Erik M" "Conway" Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Alison" "Sowden" Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard" "Somerville" Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#); [Tom Wigley](#); [Naomi Oreskes](#)  
**Subject:** Re: Top Ten List of denialist misconduct  
**Date:** Monday, March 22, 2010 5:02:38 AM

---

Dear Mark,

I don't know how one would prioritise things as in or out of the top 10, but here's one you might consider:

Global Warming Policy Foundation show the global mean temperature record only from 2001 onwards on their homepage (top left):

<<http://www.thegwpf.org/>>

In effect, they are "hiding the warming" by excluding the entire 20th century temperature record. While at the same time, the Chairman of GWPF Lord Lawson repeatedly criticises the "hide the decline" email.

Is it reasonable to hide over 100 years of measured warming while criticising the removal of some tree-ring density data during a period when we know that they do not represent temperature? And note that the decline/divergence \*was\* shown in many publications: e.g. Figure 2 of Briffa et al. (1998a); Figure 1 of Briffa et al. (1998b); Plate 2 and Figures 4, 5 and 6 of Briffa et al. (2001); Figures 11 and 12 of Briffa et al. (2002); and Figures 5, 6 and 7 of Briffa et al. (2004). Hardly hidden.

More on this here:

<<http://www.guardian.co.uk/environment/2010/mar/05/global-warming-thinktank-double-standards>>

And transcript of Lawson's evidence here:

<<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsctech/uc387-i/uc38702.htm>>

Cheers

Tim

At 19:42 20/03/2010, Boslough wrote:

>Folks, I'm preparing a presentation for next month's meeting of New  
>Mexicans for Science and Reason. The title is "Hockey Stick  
>Politics: Climategate or Clusterpuck?" (link:  
><http://www.nmsr.org/meetings.htm#latest>). I could use some help.

>  
>One of my main goals is to demonstrate a pattern of mistakes,  
>misrepresentation, misconduct, and outright fraud by  
>denialists. I'm putting together a "Top Ten List" of the examples  
>denialist wrongdoing that if had been done by mainstream scientists  
>would have resulted in calls for firings or worse. The scientific  
>community has not been willing to call out the denialists on this,  
>presumably because we dont consider non-peer-reviewed literature to  
>be worth criticizing. In our world, in which claims are debated in  
>by the rules of science, that would be true. But In the world of  
>climate politics, the non-peer-reviewed sources are given equal or  
>greater weight by the public and by policy makers, and should  
>therefore be a target of intense scientific criticism.

>  
>Here's the start of my top-ten list. If a mainstream scientist were  
>involved in anything close to one of the items on this list, it  
>would be front-page news and wall-to-wall talk-show fodder, but  
>denialists continue to get a free pass (implying that they are  
>expected to lie and cheat).

>  
>1. Plagiarism and misrepresentations in the Wegman Report. At  
>least three pages of Wegman were cribbed with only minor word  
>changes from Bradley's textbook. Even the title of the Wegman  
>Report misrepresents the MBH hockey stick as a global climate  
>reconstruction. Imagine the media reaction if three pages of an  
>IPCC publication were discovered to have been plagiarized.

>  
>2. Non-scientists impersonating scientists. The Oregon Petition  
>contains many names of individuals who claim to be scientists, but  
>who in fact are engineers, dentists, pharmacists, veterinarians,  
>etc. It would be a considered an unethical or even criminal act for  
>an unqualified person to masquerade as a member of one of those  
>occupations and to give professional advice under that pretense. It  
>seems that scientists are the only professionals expected to have  
>the humility to allow others to practice their trade without any  
>training or basic understanding.

>  
>3. Willful removal of uncertainty bands on the MBH hockey stick  
>graph by Singer et al. in the Non-IPCC report, thereby  
>misrepresenting its purported accuracy. Removing information from a  
>graph when replotted it is unethical, especially when the  
>information removed contradicts the point being made by the party  
>who is criticizing the work.

>  
>4. Removal of data from the Sargasso Sea temperature history of  
>Keigwin (1996) and replacement with a fabricated temperature by  
>Robinson et al. (2007). Robinson also replotted Keigwin's data on a  
>shifted time scale, either out of ignorance or willful desire to  
>misrepresent it. The sanitized and time-shifted Keigwin graph was  
>reproduced in the Non-IPCC report and the fabricated data point was  
>used to make the claim that temperatures were higher during the MWP.

>

>5. Jack Schmitt's claim in a 2009 white paper that Arctic (sic) sea ice has returned to 1989 levels of coverage. (link: <http://www.lpi.usra.edu/decadal/leag/>). The fact that this is an obscure paper is irrelevant; Schmitt is associated with the Heartland Institute, and putting false statements into un-reviewed reports is a standard way of meme laundering (as John Mashey puts it). I wrote to Schmitt about this and sent him the NSIDC data, so he is aware that his claim has no factual basis. Nevertheless, he refuses to correct or withdraw the paper.

>

>6. The claim that it has been cooling since 1998. I'm not sure who was the first to come up with this (Bob Carter?). We all know that this is climatologically meaningless and contrived to deceive, but non-scientists and gullible journalists think it is important. A statement that it has been warming since 19xx (where xx is any 2-digit number other than 98) is equally true. This kind of cherry picking would be considered criminally fraudulent if it were used to calculate returns on an investment and advertised that way.

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>7. The claim that, because paleoclimate records show temperature increases lead CO2 concentration increases, then CO2 cannot cause temperatures to rise. Who was the first to make this claim, and why do intelligent people not recognize the obvious logical flaw? Any scientist who makes this argument either incompetent or is intentionally perpetrating fraud. We really need to figure out how to explain this to ordinary people (Richard Alley did it best at AGU, but he was talking to scientists).

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>If anyone has any comments, suggestions, or additions to my list, please let me know. I'm presenting this on April 14.

>

>Thanks!

>

>Mark Boslough

>

>

Dr Timothy J Osborn, Academic Fellow  
Climatic Research Unit  
School of Environmental Sciences  
University of East Anglia  
Norwich NR4 7TJ, UK

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**From:** [Rick Anthes](#)  
**To:**  
**Cc:** ["Stephen H Schneider"](#); ["Mark B Boslough"](#); [trenbert@ucar.edu](#); ["Thomas Crowley"](#); [santer1@llnl.gov](#); ["Dr. Krishna AchutaRao"](#); ["Myles Allen"](#); ["Natalia Andronova"](#); ["Tim C Atkinson"](#); ["Caspar Ammann"](#); ["David C. Bader"](#); ["Tim Barnett"](#); ["Eric Barron"](#); ["Graham"](#); ["Bench"](#); ["Pat Berge"](#); ["George Boer"](#); ["Celine J. W. Bonfils"](#); ["James A." "Bono"](#); ["James Boyle"](#); ["Ray Bradley"](#); ["Robin Bravender"](#); ["Keith Briffa"](#); ["Wolfgang Brueggemann"](#); ["Lisa Butler"](#); ["Ken Caldeira"](#); ["Peter Caldwell"](#); ["Dan Cayan"](#); ["Peter U. Clark"](#); ["Amy Clement"](#); ["Nancy Cole"](#); ["William Collins"](#); ["Tina Conrad"](#); ["Curtis Covey"](#); ["birte dar"](#); ["Davies Trevor Prof"](#); ["Jay Davis"](#); ["Tomas Diaz De La Rubia"](#); ["Andrew Dessler"](#); ["Michael" "Dettinger"](#); ["Phil Duffy"](#); ["Paul J." "Ehlenbach"](#); ["Kerry Emanuel"](#); ["James Estes"](#); ["Veronika" "Eyring"](#); ["David Fahey"](#); ["Chris Field"](#); ["Peter Foukal"](#); ["Melissa Free"](#); ["Julio Friedmann"](#); ["Bill Fulkerson"](#); ["Inez Fung"](#); ["Jeff Garberson"](#); ["PETER GENT"](#); ["Nathan Gillett"](#); ["peter gleckler"](#); ["Bill Goldstein"](#); ["Hal Graboske"](#); ["Paul Gross"](#); ["Tom Guilderson"](#); ["Leopold Haimberger"](#); ["Alex Hall"](#); ["James Hansen"](#); ["harvey"](#); ["Klaus Hasselmann"](#); ["Susan Joy Hassol"](#); ["Gabi Hegerl"](#); ["Isaac Held"](#); ["Bob Hirschfeld"](#); ["Jeremy Hobbs"](#); ["Dr. Elisabeth A. Holland"](#); ["Greg Holland"](#); ["Brian Hoskins"](#); ["mhughes"](#); ["James Hurrell"](#); ["Ken Jackson"](#); ["c jakob"](#); ["Gardar Johannesson"](#); ["Philip D. Jones"](#); ["Helen Kang"](#); ["Thomas R Karl"](#); ["David Karoly"](#); ["Jeffrey Kiehl"](#); ["Steve Klein"](#); ["Knutti Reto"](#); ["John Lanzante"](#); [wily@ucar.edu](#); ["Ron Lehman"](#); ["John Lewis"](#); ["Steven A. Lloyd \(GSFC-610.2\) \[R S INFORMATION SYSTEMS INC\]"](#); ["Jane Long"](#); ["Janice Lough"](#); ["mann"](#); [emaurer@scu.edu](#); ["Linda Mearns"](#); ["carl mearns"](#); ["Jerry Meehl"](#); ["Jerry Mellillo"](#); ["George Miller"](#); ["Norman Miller"](#); ["Art Mirin"](#); ["John FB" "Mitchell"](#); ["Phil Mote"](#); ["Neville Nicholls"](#); ["Gerald R. North"](#); ["Astrid E.J. Ogilvie"](#); ["Stephanie Ohshita"](#); ["Tim Osborn"](#); ["Stu" "Ostro"](#); ["j palutikof"](#); ["Joyce Penner"](#); ["Thomas C Peterson"](#); ["Tom Phillips"](#); ["David Pierce"](#); [plattner@ipcc.unibe.ch](#); ["V. Ramaswamy"](#); ["Veerabhadran" "Ramanathan"](#); ["Sarah Raper"](#); ["Phil Rasch"](#); ["Kathryn Rauhut"](#); ["Doug Rotman"](#); ["Terry L. Root"](#); ["Robert "Sausen DLR"](#); ["jsanter"](#); ["John Schellnhuber"](#); ["David Schimel"](#); ["Michael Schlesinger"](#); ["Gavin Schmidt"](#); ["Christina L. Schomer"](#); ["Lynda Seaver"](#); ["Dian J. Seidel"](#); ["Ted Sheppard"](#); ["s sherwood"](#); ["Adrian Simmons"](#); ["soggi anthony"](#); ["brian soden"](#); ["Susan Solomon"](#); ["Ken Sperber"](#); ["Anne Stark"](#); ["Thomas Stocker"](#); ["Ronald J Stouffer"](#); [tswetnam@ltr.arizona.edu](#); ["Karl Taylor"](#); ["claudia tebaldi"](#); ["Joao P" "Teixeira"](#); ["Simon Tett"](#); ["Thomas A." "Tombrello"](#); ["David Thompson"](#); ["Lonnie Thompson"](#); ["ELLEN THOMPSON"](#); ["Peter" "Thorne"](#); ["Mike Wallace"](#); ["Bud Ward"](#); ["David "Warrilow \(GA\)"](#); ["Warren Washington"](#); ["Andrew Weaver"](#); ["Michael Wehner"](#); ["Frank Wentz"](#); ["Penny" "Whetton"](#); ["Dean N. Williams"](#); ["Gordon Yano"](#); ["Francis W. Zwiers"](#); ["Erik M" "Conway"](#); ["Sanjay Khanna"](#); ["Graham Cogley"](#); ["Jeffrey Kargel"](#); ["W. Crawford Elliott"](#); ["John Weyant"](#); ["Anthony Janetos"](#); ["Alison" "Sowden"](#); ["Vernon Squire"](#); ["Eric Garen"](#); ["Peter Cross"](#); ["Charles Zeller"](#); ["Ian Murdock"](#); ["Victoria A Arroyo"](#); ["Rashida Leonard"](#); ["Stephanie Fontenoy"](#); ["John Collee"](#); ["Sarah-jane Potts"](#); ["Greg Dutton"](#); ["Richard B. Rood"](#); ["Brien Seeley"](#); ["Mark Seeley"](#); ["Oliver Morton"](#); ["Cheryl H"](#); ["Richard" "Somerville"](#); ["Martin Heimann"](#); ["Don Kennedy"](#); ["Heidi Cullen"](#); ["Shari Bell"](#); ["Rebecca Bratspies"](#); ["Pete Myers"](#); ["Michael Oppenheimer"](#); ["Tom Wigley"](#); ["Naomi Oreskes"](#); ["mbe boslough"](#); [Anthes Richard](#)  
**Subject:** Re: response from Ross McKittrick re: possible Exxon connection  
**Date:** Sunday, March 21, 2010 5:33:46 PM

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"I just wish we had more Woodward & Bernsteins around these days."

Amen! This is what is needed (among other things).

This is a very interesting dialog. Just to remind everybody, this string will certainly become public and quoted out of context at some point, so please be careful how you phrase things. High road!

Rick

John R. Mashey wrote:

> -----Original Message-----

> From: Stephen H Schneider [<mailto:shs@stanford.edu>]

>

> "Nice list Mark, hi all. Thanks too John Mashey, well reasoned, as is everything you do. You are the expert among us in this chicanery ray tracing of money exercise, and my earlier email was not for you-- but my scientist colleagues who I think are already so knocked off our pins defensively defending well established ideas--as if they needed defending in a rational society--that we are doing much less of our own work. For that bunch of us, forget the money trail research was my advice, leave it to the real pros--you in this case."

>

>

> Thanks, I assumed your audience. I'm hardly a real pro at this, just a persistent guy with some experience at computers. The real pro on this list is Naomi - people with dirty laundry shouldn't harass people who are also historians, because they know how to find such material.

- > I just wish we had more Woodward & Bernsteins around these days.
- >
- > Over the last few months, I've had various independent discussions with various scientists, who've volunteered feelings of depression, and sometimes wondering if doing good science was doing any good.
- >
- > My standard answer might apply to many here:
- >
- > 1) You \*must\* keep doing good science, because you are the only ones who can, and we need it badly.
- >
- > 2) Some of the time, some of you, especially if you have the talent for it, should articulate the science well for the public and policymakers. Some of that can only be credibly done by you, although some of us can help at some levels. A few of you will likely have to spend a lot of time doing this.
- >
- > 3) But some of the rest of us \*have\* to help get these people of your backs.
- >
- > If you want to take the offensive, and move from 1) to 2), make sure you talk to the long-experienced folks (like Stephen), and get some PR training, because they play by very different rules that are alien to most scientists.
- >
- > And finally, as for journalistic "balance", we know how that happens.
- > The Economist at least did better, if not perfect. I'll work on them, too.
- >
- > For perspective, Surgeon General Luther Terry was a real hero. The tobacco companies actually had a veto over membership in the 1964 tobacco panel, and Terry built a group that was half smokers, although by the end of the study, almost all had quit... But they got the right answer anyway.
- >
- > "Balance" is like having a medical researcher talk about lung cancer and secondhand smoke, and having some random tobacco-tied physicist confidently explaining why it's no big deal, and might even have benefits, and can help tax revenues. Maybe if this analogy were pointed out to MSM folks, a few might get embarrassed enough to change. Maybe.
- >
- >

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\*\*\*\*\*

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Boulder, CO 80307-3000

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\*\*\*\*\*

**From:** [John R. Mashey](#)  
**To:** ["Stephen H Schneider"](#); ["Mark B Boslough"](#)  
**Cc:** [trenbert@ucar.edu](#); ["Thomas Crowley"](#); [santer1@lnl.gov](#); ["Dr. Krishna AchutaRao"](#); ["Myles Allen"](#); ["Natalia Andronova"](#); ["Tim C Atkinson"](#); ["Rick Anthes"](#); ["Caspar Ammann"](#); ["David C. Bader"](#); ["Tim Barnett"](#); ["Eric Barron"](#); ["Graham Bench"](#); ["Pat Berge"](#); ["George Boer"](#); ["Celine J. W. Bonfils"](#); ["James A. Bono"](#); ["James Boyle"](#); ["Ray Bradley"](#); ["Robin Bravender"](#); ["Keith Briffa"](#); ["Wolfgang Brueggemann"](#); ["Lisa Butler"](#); ["Ken Caldeira"](#); ["Peter Caldwell"](#); ["Dan Cayan"](#); ["Peter U. Clark"](#); ["Amy Clement"](#); ["Nancy Cole"](#); ["William Collins"](#); ["Tina Conrad"](#); ["Curtis Covey"](#); ["birte dar"](#); ["Davies Trevor Prof"](#); ["Jay Davis"](#); ["Tomas Diaz De La Rubia"](#); ["Andrew Dessler"](#); ["Michael Dettinger"](#); ["Phil Duffy"](#); ["Paul J. Ehlenbach"](#); ["Kerry Emanuel"](#); ["James Estes"](#); ["Veronika Eyring"](#); ["David Fahey"](#); ["Chris Field"](#); ["Peter Foukal"](#); ["Melissa Free"](#); ["Julio Friedmann"](#); ["Bill Fulkerson"](#); ["Inez Fung"](#); ["Jeff Garberson"](#); ["PETER GENT"](#); ["Nathan Gillett"](#); ["peter gleckler"](#); ["Bill Goldstein"](#); ["Hal Graboske"](#); ["Paul Gross"](#); ["Tom Guilderson"](#); ["Leopold Haimberger"](#); ["Alex Hall"](#); ["James Hansen"](#); ["harvey"](#); ["Klaus Hasselmann"](#); ["Susan Joy Hassol"](#); ["Gabi Hegerl"](#); ["Isaac Held"](#); ["Bob Hirschfeld"](#); ["Jeremy Hobbs"](#); ["Dr. Elisabeth A. Holland"](#); ["Greg Holland"](#); ["Brian Hoskins"](#); ["mhughes"](#); ["James Hurrell"](#); ["Ken Jackson"](#); ["c jakob"](#); ["Gardar Johannesson"](#); ["Philip D. Jones"](#); ["Helen Kang"](#); ["Thomas R Karl"](#); ["David Karoly"](#); ["Jeffrey Kiehl"](#); ["Steve Klein"](#); ["Knutti Reto"](#); ["John Lanzante"](#); [wily@ucar.edu](#); ["Ron Lehman"](#); ["John Lewis"](#); ["Steven A. Lloyd \(GSFC-610.2\) \[R S INFORMATION SYSTEMS INC\]"](#); ["Jane Long"](#); ["Janice Lough"](#); ["mann"](#); [emaurer@scu.edu](#); ["Linda Mearns"](#); ["carl mearns"](#); ["Jerry Meehl"](#); ["Jerry Melillo"](#); ["George Miller"](#); ["Norman Miller"](#); ["Art Mirin"](#); ["John FB Mitchell"](#); ["Phil Mote"](#); ["Neville Nicholls"](#); ["Gerald R. North"](#); ["Astrid E.J. Ogilvie"](#); ["Stephanie Ohshita"](#); ["Tim Osborn"](#); ["Stu Ostro"](#); ["j palutikof"](#); ["Joyce Penner"](#); ["Thomas C Peterson"](#); ["Tom Phillips"](#); ["David Pierce"](#); [plattner@ipcc.unibe.ch](#); ["V. Ramaswamy"](#); ["Veerabhadran Ramanathan"](#); ["Sarah Raper"](#); ["Phil Rasch"](#); ["Kathryn Rauhut"](#); ["Doug Rotman"](#); ["Terry L. Root"](#); ["Robert Sausen, DLR"](#); ["jsanter"](#); ["John Schellnhuber"](#); ["David Schimel"](#); ["Michael Schlesinger"](#); ["Gavin Schmidt"](#); ["Christina L. Schomer"](#); ["Lynda Seaver"](#); ["Dian J. Seidel"](#); ["Ted Sheppard"](#); ["s sherwood"](#); ["Adrian Simmons"](#); ["socci anthony"](#); ["brian soden"](#); ["Susan Solomon"](#); ["Ken Sperber"](#); ["Anne Stark"](#); ["Thomas Stocker"](#); ["Ronald J Stouffer"](#); [tswetnam@ltrr.arizona.edu](#); ["Karl Taylor"](#); ["claudia tebaldi"](#); ["Joao P Teixeira"](#); ["Simon Tett"](#); ["Thomas A. Tombrello"](#); ["David Thompson"](#); ["Lonnie Thompson"](#); ["ELLEN THOMPSON"](#); ["Peter Thorne"](#); ["Mike Wallace"](#); ["Bud Ward"](#); ["David Warrilow \(GA\)"](#); ["Warren Washington"](#); ["Andrew Weaver"](#); ["Michael Wehner"](#); ["Frank Wentz"](#); ["Penny Whetton"](#); ["Dean N. Williams"](#); ["Gordon Yano"](#); ["Francis W. Zwiers"](#); ["Erik M Conway"](#); ["Sanjay Khanna"](#); ["Graham Cogley"](#); ["Jeffrey Kargel"](#); ["W. Crawford Elliott"](#); ["John Weyant"](#); ["Anthony Janetos"](#); ["Alison Sowden"](#); ["Vernon Squire"](#); ["Eric Garen"](#); ["Peter Cross"](#); ["Charles Zeller"](#); ["Jan Murdock"](#); ["Victoria A Arroyo"](#); ["Rashida Leonard"](#); ["Stephanie Fontenoy"](#); ["John Collee"](#); ["Sarah-jane Potts"](#); ["Greg Dutton"](#); ["Richard B. Rood"](#); ["Brien Seeley"](#); ["Mark Seeley"](#); ["Oliver Morton"](#); ["Cheryl H"](#); ["Richard Somerville"](#); ["Martin Heimann"](#); ["Don Kennedy"](#); ["Heidi Cullen"](#); ["Shari Bell"](#); ["Rebecca Bratspies"](#); ["Pete Myers"](#); ["Michael Oppenheimer"](#); ["Tom Wigley"](#); ["Naomi Oreskes"](#); ["mbe boslough"](#)  
**Subject:** RE: response from Ross McKittrick re: possible Exxon connection  
**Date:** Saturday, March 20, 2010 5:17:46 PM

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-----Original Message-----

From: Stephen H Schneider [<mailto:shs@stanford.edu>]

"Nice list Mark, hi all. Thanks too John Mashey, well reasoned, as is everything you do. You are the expert among us in this chicanery ray tracing of money exercise, and my earlier email was not for you-- but my scientist colleagues who I think are already so knocked off our pins defensively defending well established ideas--as if they needed defending in a rational society--that we are doing much less of our own work. For that bunch of us, forget the money trail research was my advice, leave it to the real pros--you in this case."

Thanks, I assumed your audience. I'm hardly a real pro at this, just a persistent guy with some experience at computers. The real pro on this list is Naomi - people with dirty laundry shouldn't harass people who are also historians, because they know how to find such material.

I just wish we had more Woodward & Bernsteins around these days.

Over the last few months, I've had various independent discussions with various scientists, who've volunteered feelings of depression, and sometimes wondering if doing good science was doing any good.

My standard answer might apply to many here:

- 1) You *must* keep doing good science, because you are the only ones who can, and we need it badly.
- 2) Some of the time, some of you, especially if you have the talent for it, should articulate the science well for the public and policymakers. Some of that can only be credibly done by you, although some of

us can help at some levels. A few of you will likely have to spend a lot of time doing this.

3) But some of the rest of us *\*have\** to help get these people of your backs.

If you want to take the offensive, and move from 1) to 2), make sure you talk to the long-experienced folks (like Stephen), and get some PR training, because they play by very different rules that are alien to most scientists.

And finally, as for journalistic "balance", we know how that happens. The Economist at least did better, if not perfect. I'll work on them, too.

For perspective, Surgeon General Luther Terry was a real hero. The tobacco companies actually had a veto over membership in the 1964 tobacco panel, and Terry built a group that was half smokers, although by the end of the study, almost all had quit... But they got the right answer anyway.

"Balance" is like having a medical researcher talk about lung cancer and secondhand smoke, and having some random tobacco-tied physicist confidently explaining why it's no big deal, and might even have benefits, and can help tax revenues. Maybe if this analogy were pointed out to MSM folks, a few might get embarrassed enough to change. Maybe.

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**To:** [Mark B Boslough](#)  
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**Subject:** Re: response from Ross McKittrick re: possible Exxon connection  
**Date:** Saturday, March 20, 2010 2:52:11 PM

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Nice list Mark, hi all. Thanks too John Mashey, well reasoned, as is everything you do. You are the expert among us in this chicanery ray tracing of money exercise, and my earlier email was not for you--but my scientist colleagues who I think are already so knocked off our pins defensively defending well established ideas--as if they needed defending in a rational society--that we are doing much less of our own work. For that bunch of us, forget the money trail research was my advice, leave it to the real pros--you in this case.

As to your Jon Krosnick point John about rebuttals matter (I agree), one case in point is the polls in the UK after Channel 4 aired the fraudulent movie The Great Global Warming Swindle without rebuttal a few years ago, responses were very influenced by it. On the other hand in Australia when a bunch of us worked to do an ABC after airing rebuttal program, nothing changed in public opinion. Same with Thomas Gale More, whose arguments are totally idiotic and ideological--like him in my view. I debated him once years ago and he slowly twisted on the vine until people were actually laughing at him after he tried rebuttal spouting such garbage it was actually funny. The problem is when it is just parallel sound bites that "neutrality" is achieved--precisely the deniers objective: get equal status at the bargaining table for positions with no more than a few percent probability of being right, if that high. Destroying these guys face to face is usually a piece of cake--they are wrong and usually know less by far than we do, so with a few exceptions, are very easy to debate. The problem is we are not there most of the time for such things and in truth, here comes a big dilemma, I don't like to debate them--why inflate an intellectual nobody like Lord Monckton to some kind of legitimate prominence given their publication records in serious science--slim to none. We have entry barriers in science to be qualified to even enter a debate over the details--no medical team would let anybody else in so why should we when there really is a thing called climate science expertise. That is a problem in civil society where the notion of citizen scientist is appealing to some, and abused by others. That problem of framing of who is a legitimate debater is not going away anytime soon, and is deliberately exploited by the deniers to get equal status at the bargaining table for outrageous and ridiculous arguments--same as creationists or tobacco defenders. And in the US at least the media buy this way too often--especially now after most have fired their science specialists capable of discerning the quality of an argument. I don't know how we get around this Mark.

So do follow the money John, but for the rest of us we need to follow the science and not bury our leads every time we talk to the media with two paragraphs of caveats before we even mention irreversible climatic impacts possibilities. Keep the caveats, that is ethically required by honest scientists, just not first maybe?

Cheers and fight on, Steve

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----- Original Message -----

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Sent: Saturday, March 20, 2010 12:14:11 PM GMT -08:00 US/Canada Pacific  
 Subject: RE: response from Ross McKittrick re: possible Exxon connection

Folks,

I would like to suggest some approaches to changing the public/media debate:

1) Take control of the framing.

The burden of proof isn't on scientists to show that the Earth abides by the laws of physics. It is an extraordinary claim to assert that the thermal IR opacity of the air can increase without trapping heat and warming. The denialists offer no evidence for their extraordinary claim. We don't need to defend the science from them. We need to question their claim and require \*them\* to provide evidence, or even to explain it in terms of the most basic theory that doesn't violate the laws of physics. In fact we have a professional obligation to challenge them. The burden of proof in engineering or medicine is on the party claiming that a change can be made to a system without any risk to health or safety. That's the Hippocratic Oath: "first do no harm". The burden of proof in science is on the party making the extraordinary claim. The words "conservative" and "skeptical" have been turned on their heads by the denialists. How did we allow that to happen? We should refuse to accept the denialist/media framing and continue to use words in their traditional sense.

2) Demand fairness.

There is irony in the fact that the liberal, postmodernist "fairness" doctrine that seems to dominate the mainstream media has been exploited by denialists so that "both sides" of the debate are given equal weight. Creationists pioneered the exploitation of American fair-mindedness in their "teach the controversy" strategy. We are told that scientists are not sufficiently humble. We need to take the criticism seriously, even though practitioners of other professions (such as medicine and engineering) always exclude amateurs and dilettantes who try to be treated as equals. Pointing out that our opponents don't even have high-school level understanding of physics will not help us in the public arena, where the vast majority of citizens do not have a high-school level of understanding of physics. But everybody has a strong concept of what it means to be fair, and--if it is pointed out--I think most people will recognize that scientists have been treated unfairly by the media, who have applied a double standard. As Steve said, if we could see private correspondence among denialists, it would surely be much worse than anything that was stolen from the CRU. The fact is that the denialists \*publicly\* say worse things all the time and are rarely criticized for it, because of the media's double standard. We need to get the public on our side by demanding fairness by the media in what they chose to report and how they report it.

3) Go on the offensive

We are used to playing by the rules of science. Arguing with one another is symmetric but arguing with denialists is not. Their chess pieces don't move by the same rules as ours do. Why are scientists always surprised by their attacks? We need to demand that the media apply their investigative skills in a fair way. They can't just single out perceived misbehavior by scientists; they need to report (actual) misbehavior by denialists and their allies. I constantly read that the "hockey stick" has been discredited, but one of the primary sources of the supposed discredit is the Wegman Report, which includes three pages of plagiarized material. Which is worse, making (and correcting) a statistical error, or plagiarizing pages of material? This was discovered 3 months ago and nobody seems to care outside of a very narrow part of the blogosphere. I think we, as scientists, need to spend less time being defensive about ourselves and our work. We need to spend more time pointing out mistakes, misrepresentations, misconduct, and outright fraud by denialists. Acting as if this is below our station and don't need to do that, because they don't publish in legitimate journals, is a mistake. Maybe we will be perceived as being sufficiently humble if we are willing to get in the mud with the pigs.

Since this is a side activity for me, I'm going to switch over to my university (mbeb@unm.edu) email address for further correspondence with this group.

Regards,

Mark Boslough

> -----Original Message-----

> From: Stephen H Schneider [<mailto:shs@stanford.edu>]

> Sent: Friday, March 19, 2010 8:00 PM

> To:  
>  
> Hate to join Tom in being the heavy here, everybody, but does it really  
> matter so much? Sure, politically "follow the money" is the battle cry  
> of investigative media and opponents of whoever someone wants to smear  
> (rightly or wrongly), but McKittrick smears himself enough with bad  
> climate science in my view we don't need much more to assign low  
> confidence to his scientific credibility. If these oh so freedom loving  
> supporters of hacked privacy think climate scientists express impolite  
> and inappropriate frustrations to each other, but the oh-so-pure denier  
> set doesn't, being saints of good scientific ethics of course, why  
> don't they just volunteer to post all their private communications with  
> each other over the past 10 years and we can compare their sainthood to  
> our sinning. Wanna' bet who looks the dirtiest by FAR!!!  
>  
> We are all busy, and I am glad some of you carved time out of that  
> packed life to check the sources of support of the forces of darkness,  
> but my cynical side thinks it won't much affect the debate really,  
> since our being honest and increasingly confident based on evidence--  
> now there's a new idea?!@#\$\$%--hasn't tipped the debate yet to  
> meaningful policy, so how is knowing how many laundered bucks he got  
> going to create a social tipping point? Sure, if you learn something on  
> this go for it, but don't expect much return on investment...A mega  
> heat wave this summer is worth 3 orders of magnitude more in the PR  
> wars--too bad we have to wait for random events since evidence doesn't  
> seem to cut it anymore with the MSM (oh, sorry, jargon, main stream  
> media).  
> Fight on folks, and maybe remember Bob Dylan's song from what, 40  
> years ago in my youth--still worth repeating:  
> Come Senators, Congressmen, please heed the call  
> Don't block up the doorway, don't stand in the hall  
> 'Cause he that gets hurt will be he who has stalled  
> 'Cause the battle outside, raging  
> Will soon shake your windows and rattle your walls  
> 'Cause the times they are a-changin'  
> --that is what we need to be focusing on: getting the times a-  
> changin'--in time to avoid irreversibility in various systems. Not  
> going to be quick or easy...  
> Cheers, Steve  
>  
> Stephen H. Schneider  
> Melvin and Joan Lane Professor for Interdisciplinary Environmental  
> Studies,  
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**From:** [Boslough](#)  
**To:** [Boslough, Mark B](#)  
**Cc:** [Stephen H Schneider](#); [trenbert@ucar.edu](#); [Thomas Crowley](#); [santer1@lnl.gov](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham "Bench; Pat Berge; George Boer; Celine J. W. Bonfils; James A." "Bono; James Boyle; Ray Bradley; Robin Bravender; Keith Briffa; Wolfgang Brueggemann; Lisa Butler; Ken Caldeira; Peter Caldwell; Dan Cayan; Peter U. Clark; Amy Clement; Nancy Cole; William Collins; Tina Conrad; Curtis Covey; birte dar; Davies Trevor Prof; Jay Davis; Tomas Diaz De La Rubia; Andrew Dessler; Michael" "Dettinger; Phil Duffy; Paul J." "Ehlenbach; Kerry Emanuel; James Estes; Veronika" "Eyring; David Fahey; Chris Field; Peter Foukal; Melissa Free; Julio Friedmann; Bill Fulkerson; Inez Fung; Jeff Garberson; PETER GENT; Nathan Gillett; peter gleckler; Bill Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold Haimberger; Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy Hassol; Gabi Hegerl; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr. Elisabeth A. Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell; Ken Jackson; c jakob; Gardar Johannesson; Philip D. Jones; Helen Kang; Thomas R Karl; David Karoly; Jeffrey Kiehl; Steve Klein; Knutti Reto; John Lanzante; wily@ucar.edu; Ron Lehman; John Lewis; Steven A. "Lloyd \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]"; Jane Long; Janice Lough; mann; emaurer@scu.edu; Linda Mearns; carl mears; Jerry Meehl; Jerry Melillo; George Miller; Norman Miller; Art Mirin; John FB "Mitchell; Phil Mote; Neville Nicholls; Gerald R. North; Astrid E.J. Ogilvie; Stephanie Ohshita; Tim Osborn; Stu" "Ostro; j.palutikof; Joyce Penner; Thomas C. Peterson; Tom Phillips; David Pierce; plattner@ipcc.unibe.ch; V. Ramaswamy; Veerabhadran" "Ramanathan; Sarah Raper; Phil Rasch; Kathryn Rauhut; Doug Rotman; Terry L. Root; Robert "Sausen, DLR"; jsanter; John SchellInhuber; David Schimel; Michael Schlesinger; Gavin Schmidt; Christina L. Schomer; Lynda Seaver; Dian J. Seidel; Ted Sheppard; s sherwood; Adrian Simmons; socci anthony; brian soden; Susan Solomon; Ken Sperber; Anne Stark; Thomas Stocker; Ronald J Stouffer; tswnam@ltrr.arizona.edu; Karl Taylor; claudia tebaldi; Joao P" "Teixeira; Simon Tett; Thomas A." "Tombrello; David Thompson; Lonnie Thompson; ELLEN THOMPSON; Peter" "Thorne; Mike Wallace; Bud Ward; David "Warrilow \(GA\)"; Warren Washington; Andrew Weaver; Michael Wehner; Frank Wentz; Penny" "Whetton; Dean N. Williams; Gordon Yano; Francis W. Zwiers; Erik M" "Conway; Sanjay Khanna; Graham Cogley; Jeffrey Kargel; W. Crawford Elliott; John Weyant; Anthony Janetos; Alison" "Sowden; Vernon Squire; Eric Garen; Peter Cross; Charles Zeller; Ian Murdoch; Victoria A Arroyo; Rashida Leonard; Stephanie Fontenoy; John Collee; Sarah-jane Potts; Greg Dutton; Richard B. Rood; Brien Seeley; Mark Seeley; Oliver Morton; Cheryl H; Richard" "Somerville; Martin Heimann; Don Kennedy; Heidi Cullen; Shari Bell; Rebecca Bratspies; Pete Myers; Michael Oppenheimer; Tom Wigley; Naomi Oreskes](#)  
**Subject:** Top Ten List of denialist misconduct  
**Date:** Saturday, March 20, 2010 2:42:07 PM

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Folks, I'm preparing a presentation for next month's meeting of New Mexicans for Science and Reason. The title is "Hockey Stick Politics: Climategate or Clusterpuck?" (link: <http://www.nmsr.org/meetings.htm#latest>). I could use some help.

One of my main goals is to demonstrate a pattern of mistakes, misrepresentation, misconduct, and outright fraud by denialists. I'm putting together a "Top Ten List" of the examples denialist wrongdoing that if had been done by mainstream scientists would have resulted in calls for firings or worse. The scientific community has not been willing to call out the denialists on this, presumably because we don't consider non-peer-reviewed literature to be worth criticizing. In our world, in which claims are debated in by the rules of science, that would be true. But In the world of climate politics, the non-peer-reviewed sources are given equal or greater weight by the public and by policy makers, and should therefore be a target of intense scientific criticism.

Here's the start of my top-ten list. If a mainstream scientist were involved in anything close to one of the items on this list, it would be front-page news and wall-to-wall talk-show fodder, but denialists continue to get a free pass (implying that they are expected to lie and cheat).

1. Plagiarism and misrepresentations in the Wegman Report. At least three pages of Wegman were cribbed with only minor word changes from Bradley's textbook. Even the title of the Wegman Report misrepresents the MBH hockey stick as a global climate reconstruction. Imagine the media reaction if three pages of an IPCC publication were discovered to have

been plagiarized.

2. Non-scientists impersonating scientists. The Oregon Petition contains many names of individuals who claim to be scientists, but who in fact are engineers, dentists, pharmacists, veterinarians, etc. It would be considered an unethical or even criminal act for an unqualified person to masquerade as a member of one of those occupations and to give professional advice under that pretense. It seems that scientists are the only professionals expected to have the humility to allow others to practice their trade without any training or basic understanding.

3. Willful removal of uncertainty bands on the MBH hockey stick graph by Singer et al. in the Non-IPCC report, thereby misrepresenting its purported accuracy. Removing information from a graph when replotting it is unethical, especially when the information removed contradicts the point being made by the party who is criticizing the work.

4. Removal of data from the Sargasso Sea temperature history of Keigwin (1996) and replacement with a fabricated temperature by Robinson et al. (2007). Robinson also replotted Keigwin's data on a shifted time scale, either out of ignorance or willful desire to misrepresent it. The sanitized and time-shifted Keigwin graph was reproduced in the Non-IPCC report and the fabricated data point was used to make the claim that temperatures were higher during the MWP.

5. Jack Schmitt's claim in a 2009 white paper that Arctic (sic) sea ice has returned to 1989 levels of coverage. (link: <http://www.lpi.usra.edu/decadal/leag/>). The fact that this is an obscure paper is irrelevant; Schmitt is associated with the Heartland Institute, and putting false statements into un-reviewed reports is a standard way of meme laundering (as John Mashey puts it). I wrote to Schmitt about this and sent him the NSIDC data, so he is aware that his claim has no factual basis. Nevertheless, he refuses to correct or withdraw the paper.

6. The claim that it has been cooling since 1998. I'm not sure who was the first to come up with this (Bob Carter?). We all know that this is climatologically meaningless and contrived to deceive, but non-scientists and gullible journalists think it is important. A statement that it has been warming since 19xx (where xx is any 2-digit number other than 98) is equally true. This kind of cherry picking would be considered criminally fraudulent if it were used to calculate returns on an investment and advertised that way.

7. The claim that, because paleoclimate records show temperature increases lead CO2 concentration increases, then CO2 cannot cause temperatures to rise. Who was the first to make this claim, and why do intelligent people not recognize the obvious logical flaw? Any scientist who makes this argument either incompetent or is intentionally perpetrating fraud. We really need to figure out how to explain this to ordinary people (Richard Alley did it best at AGU, but he was talking to scientists).

If anyone has any comments, suggestions, or additions to my list, please let me know. I'm presenting this on April 14.

Thanks!

Mark Boslough

**From:** [Boslough, Mark B](#)  
**To:** [Stephen H Schneider](#); [mbe boslough](#)  
**Cc:** [trenbert@ucar.edu](#); [Thomas Crowley](#); [santer1@llnl.gov](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham "Bench" Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A. "Bono" James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Michael "Dettinger" Phil Duffy](#); [Paul J. "Ehlenbach" Kerry Emanuel](#); [James Estes](#); [Veronika "Eyring" David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c jakob](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Steven A. "Lloyd \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]" Jane Long](#); [Janice Lough](#); [mann](#); [emaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [John FB" "Mitchell](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Stu" "Ostro" j palutikof](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Veerabhadran" "Ramanathan](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Robert "Sausen, DLR"; jsanter](#); [John Schellnhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s sherwood](#); [Adrian Simmons](#); [soggi anthony](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Joao P" "Teixeira](#); [Simon Tett](#); [Thomas A." "Tombrello](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Peter" "Thorne](#); [Mike Wallace](#); [Bud Ward](#); [David "Warrilow \(GA\)" Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Penny" "Whetton](#); [Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Erik M" "Conway](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Alison" "Sowden](#); [Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Ian Murdoch](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard" "Somerville](#); [Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#); [Tom Wigley](#); [Naomi Oreskes](#)  
**Subject:** RE: response from Ross McKittrick re: possible Exxon connection  
**Date:** Saturday, March 20, 2010 2:14:52 PM

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Folks,

I would like to suggest some approaches to changing the public/media debate:

1) Take control of the framing.

The burden of proof isn't on scientists to show that the Earth abides by the laws of physics. It is an extraordinary claim to assert that the thermal IR opacity of the air can increase without trapping heat and warming. The denialists offer no evidence for their extraordinary claim. We don't need to defend the science from them. We need to question their claim and require \*them\* to provide evidence, or even to explain it in terms of the most basic theory that doesn't violate the laws of physics. In fact we have a professional obligation to challenge them. The burden of proof in engineering or medicine is on the party claiming that a change can be made to a system without any risk to health or safety. That's the Hippocratic Oath: "first do no harm". The burden of proof in science is on the party making the extraordinary claim. The words "conservative" and "skeptical" have been turned on their heads by the denialists. How did we allow that to happen? We should refuse to accept the denialist/media framing and continue to use words in their traditional sense.

2) Demand fairness.

There is irony in the fact that the liberal, postmodernist "fairness" doctrine that seems to dominate the mainstream media has been exploited by denialists so that "both sides" of the debate are given equal weight. Creationists pioneered the exploitation of American fair-mindedness in their "teach the controversy" strategy. We are told that scientists are not sufficiently humble. We need to take the criticism seriously, even though practitioners of other professions (such as medicine and engineering) always exclude amateurs and dilettantes who try to be treated as equals. Pointing out that our opponents don't even have high-school level understanding of physics will not help us in the public arena, where the vast majority of citizens do not have a high-school level of understanding of physics.

But everybody has a strong concept of what it means to be fair, and--if it is pointed out--I think most people will recognize that scientists have been treated unfairly by the media, who have applied a double standard. As Steve said, if we could see private correspondence among denialists, it would surely be much worse than anything that was stolen from the CRU. The fact is that the denialists \*publicly\* say worse things all the time and are rarely criticized for it, because of the media's double standard. We need to get the public on our side by demanding fairness by the media in what they chose to report and how they report it.

### 3) Go on the offensive

We are used to playing by the rules of science. Arguing with one another is symmetric but arguing with denialists is not. Their chess pieces don't move by the same rules as ours do. Why are scientists always surprised by their attacks? We need to demand that the media apply their investigative skills in a fair way. They can't just single out perceived misbehavior by scientists; they need to report (actual) misbehavior by denialists and their allies. I constantly read that the "hockey stick" has been discredited, but one of the primary sources of the supposed discredit is the Wegman Report, which includes three pages of plagiarized material. Which is worse, making (and correcting) a statistical error, or plagiarizing pages of material? This was discovered 3 months ago and nobody seems to care outside of a very narrow part of the blogosphere. I think we, as scientists, need to spend less time being defensive about ourselves and our work. We need to spend more time pointing out mistakes, misrepresentations, misconduct, and outright fraud by denialists. Acting as if this is below our station and don't need to do that, because they don't publish in legitimate journals, is a mistake. Maybe we will be perceived as being sufficiently humble if we are willing to get in the mud with the pigs.

Since this is a side activity for me, I'm going to switch over to my university (mbeb@unm.edu) email address for further correspondence with this group.

Regards,

Mark Boslough

> -----Original Message-----

> From: Stephen H Schneider [<mailto:shs@stanford.edu>]

> Sent: Friday, March 19, 2010 8:00 PM

> To:

>

> Hate to join Tom in being the heavy here, everybody, but does it really  
> matter so much? Sure, politically "follow the money" is the battle cry  
> of investigative media and opponents of whoever someone wants to smear  
> (rightly or wrongly), but McKitrick smears himself enough with bad  
> climate science in my view we don't need much more to assign low  
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> supporters of hacked privacy think climate scientists express impolite  
> and inappropriate frustrations to each other, but the oh-so-pure denier  
> set doesn't, being saints of good scientific ethics of course, why  
> don't they just volunteer to post all their private communications with  
> each other over the past 10 years and we can compare their sainthood to  
> our sinning. Wanna' bet who looks the dirtiest by FAR!!!

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> We are all busy, and I am glad some of you carved time out of that  
> packed life to check the sources of support of the forces of darkness,  
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> meaningful policy, so how is knowing how many laundered bucks he got  
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- > seem to cut it anymore with the MSM (oh, sorry, jargon, main stream
- > media).
- > Fight on folks, and maybe remember Bob Dylan's song from what, 40
- > years ago in my youth--still worth repeating:
- > Come Senators, Congressmen, please heed the call
- > Don't block up the doorway, don't stand in the hall
- > 'Cause he that gets hurt will be he who has stalled
- > 'Cause the battle outside, raging
- > Will soon shake your windows and rattle your walls
- > 'Cause the times they are a-changin'
- > --that is what we need to be focusing on: getting the times a-
- > changin'--in time to avoid irreversibility in various systems. Not
- > going to be quick or easy...
- > Cheers, Steve
- >
- > Stephen H. Schneider
- > Melvin and Joan Lane Professor for Interdisciplinary Environmental
- > Studies,
- > Professor, Department of Biology and
- > Senior Fellow, Woods Institute for the Environment
- > Mailing address:
- > Yang & Yamazaki Environment & Energy Building - MC 4205
- > 473 Via Ortega
- > Ph: 650 725 9978
- > F: 650 725 4387
- > Websites: [climatechange.net](http://climatechange.net)
- > [patientfromhell.org](http://patientfromhell.org)
- >

**From:** [Tom Wigley](#)

**To:**

**Cc:** ["Stephen H Schneider"](#); [trenbert@ucar.edu](#); ["Thomas Crowley"](#); [santer1@lnl.gov](#); ["Dr. Krishna AchutaRao"](#); ["Myles Allen"](#); ["Natalia Andronova"](#); ["Tim C Atkinson"](#); ["Rick Anthes"](#); ["Caspar Ammann"](#); ["David C. Bader"](#); ["Tim Barnett"](#); ["Eric Barron"](#); ["Graham" "Bench"](#); ["Pat Berge"](#); ["George Boer"](#); ["Celine J. W. Bonfils"](#); ["James A." "Bono"](#); ["Mark B" "Boslough"](#); ["James Boyle"](#); ["Ray Bradley"](#); ["Robin Bravender"](#); ["Keith Briffa"](#); ["Wolfgang Brueggemann"](#); ["Lisa Butler"](#); ["Ken Caldeira"](#); ["Peter Caldwell"](#); ["Dan Cayan"](#); ["Peter U. Clark"](#); ["Amy Clement"](#); ["Nancy Cole"](#); ["William Collins"](#); ["Tina Conrad"](#); ["Curtis Covey"](#); ["birte dar"](#); ["Davies Trevor Prof"](#); ["Jay Davis"](#); ["Tomas Diaz De La Rubia"](#); ["Andrew Dessler"](#); ["Michael" "Dettinger"](#); ["Phil Duffy"](#); ["Paul J." "Ehlenbach"](#); ["Kerry Emanuel"](#); ["James Estes"](#); ["Veronika" "Eyring"](#); ["David Fahey"](#); ["Chris Field"](#); ["Peter Foukal"](#); ["Melissa Free"](#); ["Julio Friedmann"](#); ["Bill Fulkerson"](#); ["Inez Fung"](#); ["Jeff Garberson"](#); ["PETER GENT"](#); ["Nathan Gillett"](#); ["peter gleckler"](#); ["Bill Goldstein"](#); ["Hal Graboske"](#); ["Paul Gross"](#); ["Tom Guilderson"](#); ["Leopold Haimberger"](#); ["Alex Hall"](#); ["James Hansen"](#); ["harvey"](#); ["Klaus Hasselmann"](#); ["Susan Joy Hassol"](#); ["Gabi Hegerl"](#); ["Isaac Held"](#); ["Bob Hirschfeld"](#); ["Jeremy Hobbs"](#); ["Dr. Elisabeth A. Holland"](#); ["Greg Holland"](#); ["Brian Hoskins"](#); ["mhughes"](#); ["James Hurrell"](#); ["Ken Jackson"](#); ["c jakob"](#); ["Gardar Johannesson"](#); ["Philip D. Jones"](#); ["Helen Kang"](#); ["Thomas R Karl"](#); ["David Karoly"](#); ["Jeffrey Kiehl"](#); ["Steve Klein"](#); ["Knutti Reto"](#); ["John Lanzante"](#); ["wily@ucar.edu"](#); ["Ron Lehman"](#); ["John Lewis"](#); ["Steven A. "Lloyd \(GSFC-610.2\)"\[R S INFORMATION SYSTEMS INC\]"](#); ["Jane Long"](#); ["Janice Lough"](#); ["mann"](#); ["emaure@scu.edu"](#); ["Linda Mearns"](#); ["carl mearns"](#); ["Jerry Meehl"](#); ["Jerry Melillo"](#); ["George Miller"](#); ["Norman Miller"](#); ["Art Mirin"](#); ["John FB" "Mitchell"](#); ["Phil Mote"](#); ["Neville Nicholls"](#); ["Gerald R. North"](#); ["Astrid E.J. Ogilvie"](#); ["Stephanie Ohshita"](#); ["Tim Osborn"](#); ["Stu" "Ostro"](#); ["j palutikof"](#); ["Joyce Penner"](#); ["Thomas C Peterson"](#); ["Tom Phillips"](#); ["David Pierce"](#); [plattner@ipcc.unibe.ch](#); ["V. Ramaswamy"](#); ["Veerabhadran" "Ramanathan"](#); ["Sarah Raper"](#); ["Phil Rasch"](#); ["Kathryn Rauhut"](#); ["Doug Rotman"](#); ["Terry L. Root"](#); ["Robert "Sausen, DLR"](#); ["jsanter"](#); ["John Schellnhuber"](#); ["David Schimel"](#); ["Michael Schlesinger"](#); ["Gavin Schmidt"](#); ["Christina L. Schomer"](#); ["Lynda Seaver"](#); ["Dian J. Seidel"](#); ["Ted Sheppard"](#); ["s sherwood"](#); ["Adrian Simmons"](#); ["soggi anthony"](#); ["brian soden"](#); ["Susan Solomon"](#); ["Ken Sperber"](#); ["Anne Stark"](#); ["Thomas Stocker"](#); ["Ronald J Stouffer"](#); ["tswetnam@lrr.arizona.edu"](#); ["Karl Taylor"](#); ["claudia tebaldi"](#); ["Joao P" "Teixeira"](#); ["Simon Tett"](#); ["Thomas A." "Tombrello"](#); ["David Thompson"](#); ["Lonnie Thompson"](#); ["ELLEN THOMPSON"](#); ["Peter" "Thorne"](#); ["Mike Wallace"](#); ["Bud Ward"](#); ["David "Warrilow \(GA\)"](#); ["Warren Washington"](#); ["Andrew Weaver"](#); ["Michael Wehner"](#); ["Frank Wentz"](#); ["Penny" "Whetton"](#); ["Dean N. Williams"](#); ["Gordon Yano"](#); ["Francis W. Zwiers"](#); ["Erik M" "Conway"](#); ["Sanjay Khanna"](#); ["Graham Cogley"](#); ["Jeffrey Kargel"](#); ["W. Crawford Elliott"](#); ["John Weyant"](#); ["Anthony Janetos"](#); ["Alison" "Sowden"](#); ["Vernon Squire"](#); ["Eric Garen"](#); ["Peter Cross"](#); ["Charles Zeller"](#); ["Ian Murdock"](#); ["Victoria A Arroyo"](#); ["Rashida Leonard"](#); ["Stephanie Fontenoy"](#); ["John Collee"](#); ["Sarah-jane Potts"](#); ["Greg Dutton"](#); ["Richard B. Rood"](#); ["Brien Seeley"](#); ["Mark Seeley"](#); ["Oliver Morton"](#); ["Cheryl H"](#); ["Richard" "Somerville"](#); ["Martin Heimann"](#); ["Don Kennedy"](#); ["Heidi Cullen"](#); ["Shari Bell"](#); ["Rebecca Bratspies"](#); ["Pete Myers"](#); ["Michael Oppenheimer"](#); ["Naomi Oreskes"](#)

**Subject:** Re: response from Ross McKittrick re: possible Exxon connection

**Date:** Saturday, March 20, 2010 1:28:21 PM

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John,

Thanks for this, and your other work on these issues. I agree fully with your balanced perspective. Chasing after individuals is not a high priority, but I applaud what you have done here. There are bigger fish in the sea.

Indeed, there are even bigger fish, and the US is rapidly losing ground. I speak here of the efforts by China, India, Russia, Sth Korea, to develop nuclear power. (China, e.g., has some 24 nuclear plants under construction.) Until Gore, Clinton and Kerry shut down our Gen. 4 reactor program, we were way ahead of these countries -- now we are behind in many (but not all) aspects. If these countries go nuclear over coming decades, and if, as a consequence, the cost of nuclear energy is reduced from its already low level, then our tardiness in the US (for whatever reason) will make our decisions here irrelevant.

Here is an interesting story. The UAE is having a nuclear plant built by South Korea (can't remember the cost precisely, about \$3700 per GWe from memory -- making nuclear energy, over plant lifetime, competitive with coal). The time to build is 3 to 5 years. What is interesting is that, of all places, the UAE has an abundant solar resource -- yet they have decided to go nuclear.

Please don't take the numbers above as gospel -- my point is that the US may soon be left behind, and the influences of lobbies, skeptics

and money may well become increasingly less important. And don't take my comments here on nuclear energy as more than just a small bite out of the very large and complex cake of the nuclear energy issue.

Regarding my apparent defense of people like McKittrick, this was done partly in ignorance of what you have done. Of course, we must abide by the principle of innocent until proven guilty. You have, however, provided some telling evidence about funding sources (and other incentives) for people on the skeptics side. Thanks.

As a final word (oft stated) -- the bogus science that skeptics propagate is still a key issue -- and one where we, as scientists, can contribute by countering this misinformation in the scientific literature. This may be a small contribution, but it is still important.

Tom.

+++++

John R. Mashey wrote:

> Stephen says:

>

> Hate to join Tom in being the heavy here, everybody, but does it really matter so much? Sure, politically "follow the money" is the battle cry of investigative media and opponents of whoever someone wants to smear (rightly or wrongly), but McKittrick smears himself enough with bad climate science in my view we don't need much more to assign low confidence to his scientific credibility. If these oh so freedom loving supporters of hacked privacy think climate scientists express impolite and inappropriate frustrations to each other, but the oh-so-pure denier set doesn't, being saints of good scientific ethics of course, why don't they just volunteer to post all their private communications with each other over the past 10 years and we can compare their sainthood to our sinning. Wanna' bet who looks the dirtiest by FAR!!!

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> Cheers, Steve

> =====

>

> 1) I don't think Tom is a heavy, nor John Houghton. I think they are both Good Guy Scientists, but Good Guy Scientists need to avoid both kinds of actions that give aid and comfort to the other side, i.e., either making difficult-to-prove accusations whose answers are mostly irrelevant, or not having quite the precise questions to ask ... and in any case, the answers are indeed generally irrelevant.

> (And of course I've talked to Stephen often enough to know he makes a bad heavy. :-))

>

> 2) The funding flow study is \*for\* Congressman & Senators (or their staffs, really), in the hope that there's even a .1% chance somebody will get serious and do an investigation. IF somebody thinks there is even a plausible 18USC1001 case to be made around the whole Wegman episode (and some lawyers have looked at this, and don't think it's fantasy), THEN the funding flow documentation offers a roadmap to roll \*up\* the machine that feeds CEI, GMI, etc. Put another way:

>

> a) One can get distracted by trying to prove funding for any given individual.

>

> b) BUT, if it turns out that there is a plausible case that persons (A, B, C,D, E, F...) have committed a crime, in a conspiracy (18USC371) to do so, then it seems plausible to ask those who funded them uncomfortable questions under oath. That means following the funding chains \*backwards\*, which is way more important than following them forwards. People like McKittrick are \*symptoms\*, not root causes, which is why I'd never spend a lot of time obsessing over a few \$K that might have come from Exxon. One of my wishful dreams would be to see Richard Mellon Scaife and the Kochs on the witness stand sometime, the way Waxman had the cigarette CEOs up there.

>

> 3) Of course, were any such thing to ever happen, subpoenas are \*way better\* than FOIA for prying loose emails. My report showed a few emails that happened to be around from earlier FOIAs, and they offer very good hints of more. Do \*not\* bet against Stephen regarding what would be found :-)

>

> 4) I've been taking a wonderful seminar course at Stanford run by Terry Root & Meg Caldwell, "Coping with Climate Change: Life after Copenhagen" with great speakers.

> Ben gave a fine, moving talk there earlier in the quarter. (Thanks again, Ben)

>

> We finished with an interesting talk last Thursday by Stanford's Jon Krosnick, about polling results:

>

> <http://woods.stanford.edu/research/majority-believe-global-warming.html>

> There is both good news and bad news, and people really should consider looking at this.

> The good news will perk you up.

>

> The bad news ... is the reason for going after the root causes, not just the symptoms. Specifically:

>

> "Climate skeptics are having some effect on the public's belief that there is agreement among scientists that global warming is happening."

> If you follow that, you get to some videos that Jon showed us Thursday:

> <http://woods.stanford.edu/research/global-warming-skeptics.html>

>

> "Consequences without skeptic" had an interview with none other than Stephen, and when people saw that, their attitudes became more reality-based.

>

> But watch the short video "Consequences with skeptic", which adds on Hoover Institution \*economist\* Thomas Gale Moore (looking just like a sibling of Fred Singer, avuncular, reassuring, certain that more CO2 meant more plants, and we eat plants, so more CO2 is good, blah , blah)

>

> That level of expertise was enough to cause confusion, in fact, \*more than canceling" what Stephen had said. Anyway, watch the video and Jon's analysis. My one critique would be to see if it makes a difference which order the two are shown, since it's well-known that having the last word help.

>

> I agree 100% with Stephen that it is a waste of time to worry about any little Exxon funding for any particular individual. What might help is throwing rocks into the gears of the machine that recruits, develops, supports, publicizes them, and makes sure they get "equal time" in the MSM. All that is much more relevant than occasional financial payments that might or might not have happened.

>

> Of course, the next disaster will indeed help more, sigh.

>

>

>

>

>

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**Subject:** Re: response from Ross McKittrick re: possible Exxon connection  
**Date:** Saturday, March 20, 2010 12:40:27 PM

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Totally agree with Dr. Schneider; Look ahead and stay mindful that the vivid metaphor often frustrates and trumps the scholarly bullet points.

Brien

Brien A. Seeley M.D., President

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On Mar 19, 2010, at 7:00 PM, Stephen H Schneider wrote:

Hate to join Tom in being the heavy here, everybody, but does it really matter so much? Sure, politically "follow the money" is the battle cry of investigative media and opponents of whoever someone wants to smear (rightly or wrongly), but McKittrick smears himself enough with bad climate science in my view we don't need much more to assign low confidence to his scientific credibility. If these oh so freedom loving supporters of hacked privacy think climate scientists express impolite and inappropriate frustrations to each other, but the oh-so-pure denier set doesn't, being saints of good scientific ethics of course, why don't they just volunteer to post all their private communications with each other

over the past 10 years and we can compare their sainthood to our sinning. Wanna' bet who looks the dirtiest by FAR!!!

We are all busy, and I am glad some of you carved time out of that packed life to check the sources of support of the forces of darkness, but my cynical side thinks it won't much affect the debate really, since our being honest and increasingly confident based on evidence--now there's a new idea?!@#%--hasn't tipped the debate yet to meaningful policy, so how is knowing how many laundered bucks he got going to create a social tipping point? Sure, if you learn something on this go for it, but don't expect much return on investment...A mega heat wave this summer is worth 3 orders of magnitude more in the PR wars--too bad we have to wait for random events since evidence doesn't seem to cut it anymore with the MSM (oh, sorry, jargon, main stream media).

Fight on folks, and maybe remember Bob Dylan's song from what, 40 years ago in my youth--still worth repeating:

Come Senators, Congressmen, please heed the call  
Don't block up the doorway, don't stand in the hall  
'Cause he that gets hurt will be he who has stalled  
'Cause the battle outside, raging  
Will soon shake your windows and rattle your walls  
'Cause the times they are a-changin'

--that is what we need to be focusing on: getting the times a-changin'--in time to avoid irreversibility in various systems. Not going to be quick or easy...

Cheers, Steve

Stephen H. Schneider

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Sent: Friday, March 19, 2010 5:58:58 PM GMT -08:00 US/Canada Pacific  
Subject: RE: response from Ross McKittrick re: possible Exxon  
connection

On the other hand, I presume that there is no evidence that McKittrick  
received any such indirect funds. So ... let us not simply \*assume\*  
guilt, which seems to be the tenor of some of these emails.

Tom.

+++++

Assuming guilt is certainly bad, and even counterproductive. Rather than  
trying to disentangle the confusion caused by misframed comments or  
questions, it might help to see what is \*actually\* known and unknown  
about:

(a) climate anti-science money flow mechanisms in general and  
(b) A bit on how that might apply to McKittrick in particular. That seems  
generally less important, equivalent to inferring global temperature  
trends

by reading a thermometer located inside a refrigerator. At best, even  
taking out of the fridge wouldn't tell you much.

I've spent much of the last month or so trying to track down and quantify  
(a), which I think is much more complex than for the tobacco wars, at  
least

the earlier phases. It is very difficult to quantify (b), and is probably  
not even event important, as it is more a diversion than anything else.

MOST OF YOU WOULD LIKELY SKIP THIS (LONG) EMAIL, but if you talk  
to the

press or otherwise opine publicly, or care to understand how the funding  
really works for climate anti-science, PLEASE READ ON. I have often  
counseled people to avoid over-emphasizing ExxonMobil (EM) and  
especially to

avoid saying anything about direct payments from EM to "expert

spokespeople", because they basically don't exist, as K.T. and N.O. said.

But even if they did exist, they are far less relevant than other money flows and structures.

All this properly belongs more to good investigative journalism, but the professionals there are less in evidence lately, leaving it to us amateurs to do what we can.

The page numbers reference:

<http://www.desmogblog.com/crescendo-climategate-cacophony> (new, major

upgrade to that earlier piece)

That's 185 pages, but most people can look at the first 4 to see if there's anything they want to read. Print pages 2-4 for navigation, then open the

PDF with 2 windows to read mainline & Appendices. This wasn't written to

address the question that started all this, so the discussion is not in any one section, but it does have much relevant data.

OUTLINE:

0) EUPHEMISTIC NAMES

1) MONEY-LAUNDERING NET

2) FOUNDATIONS =\$\$\$=> THINK TANKS

3) THE MISSING MONEY, >50%

4) MONEY IS NOT THE ONLY CURRENCY ANYWAY, AND OFTEN NOT THE MOST IMPORTANT

5) MCKITRICK

=====

0) EUPHEMISTIC NAMES (says K.T.): for sure.

See "What's in a Name?" P.50.

"Foundation", "Institute", "Science" are popular. Many are tax-free 501(c)3s, but curiously located within a block of Washington's K Street (lobbyist central). Zoom in on:

[http://maps.google.com/maps/ms?](http://maps.google.com/maps/ms?hl=en&ie=UTF8&msa=0&msid=10794082518951777198)

[hl=en&ie=UTF8&msa=0&msid=10794082518951777198](http://maps.google.com/maps/ms?hl=en&ie=UTF8&msa=0&msid=10794082518951777198)

1.0004815492d08b0c445f9&ll=38.882481,-

76.978455&spn=0.771829,1.253815&z=10

Whether these 501(c)3's break any laws on lobbying limits is beyond me, and

those laws are a bit vague. For sure, many of these \*seem\* like tax-free ways to do lobbying and PR.

1) MONEY-LAUNDERING NET - Fig 2.1, Anti-Science Flow of Money and memes,

p.10

This has a \$\$\$-filled black cloud, through which exist an amazing variety of

paths, but almost never direct from EM to spokespeople (the red box).

That

diagram oversimplifies, because sometimes money goes through Think Tanks to

Fronts, or Fronts (especially trade associations like API (American

Petroleum Institute, p.54) to Think tanks, and sometimes through PR

agencies. There are other routes as well.

2) FOUNDATIONS =\$\$=> THINK TANKS- TABLE A.6.1, pp. 93-95. This shows multi-year funding totals for various family foundations (of which the top-10 are especially relevant) and for the EM foundation (two separate analyses of the same thing). The table shows tobacco connections, \$ funding here, and nonprofit 501(c)3 or equivalent status elsewhere. CHC (Cooler Heads Coalition) is a front, run by CEI (Competitive Enterprise Institute), but whose members mostly are think tanks funded by the same foundations, so money flows are murky. For the Heartland conferences (Heart#1,#2,#3) cosponsors are marked, but one cannot tell whether they paid money to Heartland, or the reverse...

EM

The EM money shown is only that fraction of their funding made public by having it flow through their Foundation. As shown in Table A.6.1(c), p.95, the total is \$11M-\$14M, WHICH IS ROUNDING ERROR FOR EM. Table A.2.1, p.45 shows 2001-2008 EM foundation funding of each think tank by year.

I still don't really understand why they did it this way, since it made those numbers public, for which they have taken much flak. It seems likely that EM spends more money through API, through lobbyists, for political donations or directly to other organizations (but rarely to individual spokespeople). They have occasionally slipped:

For example (p.156), the well-remembered 2003 Soon & Baliunas Climate Research paper acknowledged:

"This scientific research was supported by generous grants from the Charles G. Koch Charitable Foundation, American Petroleum Institute, and Exxon-Mobil Corporation. The views expressed herein are solely those of the author and are independent of sources providing support." Yes, certainly :-)

SCAIFE (p.47-48)

The Allegheny, Carthage, and SSF (Sarah Scaife) Foundations are all run by Richard Mellon Scaife, i.e., includes Gulf Oil ==> Chevron money. Scaife's personal holdings (big) and any personal donations are unknown to me, but the published stock holdings of Carthage + SSF are highest for TOBACCO (\$29.3m) AND OIL-RELATED (\$28.4m). Oddly, Chevron (\$2.2M) is far

outweighed  
by EM (\$22.6M).

KOCH (p.47)

The C.G.Koch, C.R.Lambe, and D.H.Koch foundations are controlled by the Koch family, i.e., sons of the guy who cofounded the John Birch Society, and owners of Koch Industries, i.e., Big Oil&Gas. The foundation \$\$\$ are shown, but Koch Industries itself is James Inhofe's #1 contributor, ahead of EM. (p.130). But then, EM also takes care of Joe Barton (p.110.) The Kochs must laugh at EM for taking the flak it does for funding think tanks.

EARHART

This started with White Star Oil. That leaves OLIN & BRADLEY foundations without obvious oil ties.

3) THE MISSING MONEY, >50%

By rummaging through most think tank's "990" forms, or summaries thereof, one can see their revenues, although rarely will they ever say anything about who gave them the money. One can compare that with the numbers from Foundation giving, and the difference is UNKNOWN.

One can do a simple "attribution analysis", p.46.

E: EM Foundation

F: Family Foundations, which have varying degrees of fossil-relatedness.

U: Unknown: could be direct from EM or other corporations, or individuals,

or (retired EM executives given consulting money to be donated somewhere),

or PR agencies, or intermediate foundations (like Atlas), or fronts, or industry associations.

Here are the percentages of 5 think tanks:

E, F, U:

16%, 0%, 84%: Annapolis Center

6%, 15%, 78%: CEI - Competitive Enterprise Institute

13%, 33%, 53%: CFACT; recent boost in funding not long before Morano arrived

9%, 55%, 36%: GMI - George C. Marshall Institute

2%, 10%, 87%: Heartland, huge boost in funding in last few years....

but

UNKNOWN source.

BOTTOM LINE: we do NOT know where even half of their money really comes

from, and the \*visible\* EM money is not a big piece of this. I do not

know

whether funds given to think tanks are targeted for specific projects or individuals, but the latter seem especially unlikely. I would bet that each year, fundees extol their accomplishments and abilities to potential funders, competing for (relatively small) amounts of money. They probably

get checks categorized as "in support of sound science and education", or something like that.

[Why would I bet this? Well, such sorts of things show up in the Tobacco Archives, and many of these think tanks have tobacco connections. (p.68)]

Since 2001, GMI's CEO has been William O'keefe (p.144), an EM registered

lobbyist in 2005, and a 25-veteran of the API. It is not unthinkable that the unknown GMI money might have a little oil in it, although there is likely some aerospace/defense money not found in many others.

CEI, CFACT, GMI and SEPP (Fred Singer's then-wife) were all involved in the

1998 GCSCT project (p.19-20, p.82)) organized by the API, and including attendance by Randy Randol (p.147), who some of you may know as the senior

EM lobbyist who wrote to GWBush wishing to remove Bob Watson from IPCC, and

replace Bierbaum & MacCracken with Christy and Lindzen.

I didn't do the Fraser Institute here; Deep Climate knows them much better,

as does Donald Gutstein (reference [GUT2009][ on p.38]. They've gotten a

little money from EM foundation, not much. Do they get money from Imperial

Oil? (70%-owned by EM). I don't know.

4) MONEY IS NOT THE ONLY CURRENCY ANYWAY, AND OFTEN NOT THE MOST IMPORTANT

Figs 2.5-2.6, pp13-14 catalog reasons people might do anti-science only a

few of which are directly financial. Of the many Heartland speakers, at least some probably never get asked to talk anywhere else (PSY3 - attention, publicity).

Notoriety may be a goal, or it may be an indirect way of making other money

by selling books, having speaking invitations, other consulting, or just getting paid trips to speak for appreciative audiences.

(It actually seems slightly weird to have a bunch of very distinguished scientists worrying about relatively small money flows. All of you are easily smart enough to have made more money in careers other than science

... as was discovered by some of my Bell Labs colleagues when they left

a  
downsizing BTL for Wall Street... If anybody knows that people do things for many reasons other than money, it should be you!)

In any case, I suspect EM pays lobbyists and PR agencies well. It gets terrific leverage from think tanks with relatively miniscule amounts of money, and rarely gives big consulting money directly to spokespeople, because they are far more valuable if they can say "No EM money." Any why not? Scaife and Koch can be relied to help out, and the rest of the oil folks via API.

HENCE, even if one knew exact details of funding paths for some individual, it really doesn't mean much. What counts is the overall structure of Fig 2.1 (p.10), and that's what that money really goes for, I think. This structure is more complex than the early days of tobacco, and is very confusing, with multiple think tanks and fronts coming and going, and competing for funding, and cooperating otherwise. It would be astonishing if this were not on purpose...

Looking at one individual is a bit akin to obsession with one groundstation, but given the impetus:

5) MCKITRICK

It is nontrivial to prove many indirect payments, but there are lots of plausible questions.

a) McKitrick (and McIntyre) did have trips paid to Washington via CEI or GMI.

How does one count being heavily promoted around Washington (Ebell (CEI)

p.120, A.9.2, p.162, etc), and being introduced to Inhofe and being promoted

by him? And later, Barton?

I have no idea how to place monetary value on that, but PR is worth something.

How often is such exposure available to Guelph professors?

How about getting written up on first page of WSJ?

b) He wrote that piece for CEI. Maybe there a few EM \$\$ there, but not many. I'd never make a big deal of that.

c) Of course, working with GMI means working with O'keefe, i.e., close to API & EM, which I actually consider more relevant than the EM portion of any

possible small fees.

d) He became a GMI "expert" in 2004. That may well be unpaid, as many

people sign up to be "advisors" or "Experts." He was also a Heartland Expert (HeartExp#1, p.97).

e) McKitrick in 2007 was the "Coordinator" for the ISPM produced by Fraser:  
[http://www.fraserinstitute.org/COMMERCE.WEB/product\\_files/Independen%20Summary5.pdf](http://www.fraserinstitute.org/COMMERCE.WEB/product_files/Independen%20Summary5.pdf)  
(Writers: D'Aleo, Khandekar, Kinninmonth, Essex, Karlen, Karner, Clark, Murty, O'Brien.  
I really should have included that in my report).  
This is a nicely-produced document. Did anyone get paid for this work? Who knows? It could be, or people might happily do it for free to keep their names out there.

f) Table A.6.2(a) Shows people versus activities. McKitrick spoke at the 2008 and 2009 Heartland conferences in NYC. Did he get any expenses paid?  
If so, where did that money come from? (That one is really murky).

f) He spoke at Helmer2009 (p.86) in Europe.

g) For more oil connections, see p.138.  
Of the 4 think tanks he mentions there:  
SPPI (p.74): ??, but SPPI's Rob Ferguson was EM-funded just before he spunoff.  
CO2Science (CSCDGC, p.57) some money from EM and SSF  
Friends of Science (FoS) - Alberta oil  
CEI - shown above.

h) See his short C.V:  
<http://www.uoguelph.ca/~rmckitri/cv.html>  
(his 2003 book with Essex) "was awarded the \$10,000 Donner Prize for Best Book on Canadian Public Policy." That sounds good...

"The annual Donner Awards, sponsored by the Donner Canadian Foundation and administered by the Fraser Institute,"  
<http://www.fraserinstitute.org/newsandevents/news/6977.aspx>

"Professor McKitrick has been cited in media around the world as an expert on the science and policy of global warming. He has made invited academic presentations in Canada, the US and Europe, and has testified before the US Congress and the Canadian Parliamentary Finance and Environment Committees.  
In 2006 he was one of 12 experts from around the world asked to brief a panel of the US National Academy of Sciences on paleoclimate reconstruction

methodology."

#### 5) SUMMARY

"X is paid by Exxon" is usually very unlikely, and it's unfortunately a fairly useless question that in fact, people would \*like\* to be asked, because they can say NO.

The money-laundering architecture is brilliantly designed, with only rare slipups.

a) Direct payments: almost never findable, if they exist at all.

b) Indirect payments for work, as Heartland paying \$140K to Fred Singer for

NIPCC: sometimes.

c) Indirect payments for expenses, maybe speakers' fees: sometimes.

There are many more ways to steer money to somebody without leaving obvious tracks.

d) Hard-to-calibrate worth of publicity, contact, etc: very often, and very cost-effective, as "wish for attention" is a powerful motivator, and it is very cheap.

**From:** [John R. Mashey](#)  
**To:** ["Stephen H Schneider"](#)  
**Cc:** [trenbert@ucar.edu](#); ["Thomas Crowley"](#); [santer1@lnl.gov](#); ["Dr. Krishna AchutaRao"](#); ["Myles Allen"](#); ["Natalia Andronova"](#); ["Tim C Atkinson"](#); ["Rick Anthes"](#); ["Caspar Ammann"](#); ["David C. Bader"](#); ["Tim Barnett"](#); ["Eric Barron"](#); ["Graham Bench"](#); ["Pat Berge"](#); ["George Boer"](#); ["Celine J. W. Bonfils"](#); ["James A. Bono"](#); ["Mark B. Boslough"](#); ["James Boyle"](#); ["Ray Bradley"](#); ["Robin Bravender"](#); ["Keith Briffa"](#); ["Wolfgang Brueggemann"](#); ["Lisa Butler"](#); ["Ken Caldeira"](#); ["Peter Caldwell"](#); ["Dan Cayan"](#); ["Peter U. Clark"](#); ["Amy Clement"](#); ["Nancy Cole"](#); ["William Collins"](#); ["Tina Conrad"](#); ["Curtis Covey"](#); ["birte dar"](#); ["Davies Trevor Prof"](#); ["Jay Davis"](#); ["Tomas Diaz De La Rubia"](#); ["Andrew Dessler"](#); ["Michael Dettinger"](#); ["Phil Duffy"](#); ["Paul J. Ehlenbach"](#); ["Kerry Emanuel"](#); ["James Estes"](#); ["Veronika Eyring"](#); ["David Fahey"](#); ["Chris Field"](#); ["Peter Foukal"](#); ["Melissa Free"](#); ["Julio Friedmann"](#); ["Bill Fulkerson"](#); ["Inez Fung"](#); ["Jeff Garberson"](#); ["PETER GENT"](#); ["Nathan Gillett"](#); ["peter gleckler"](#); ["Bill Goldstein"](#); ["Hal Graboske"](#); ["Paul Gross"](#); ["Tom Guilderson"](#); ["Leopold Haimberger"](#); ["Alex Hall"](#); ["James Hansen"](#); ["harvey"](#); ["Klaus Hasselmann"](#); ["Susan Joy Hassol"](#); ["Gabi Hegerl"](#); ["Isaac Held"](#); ["Bob Hirschfeld"](#); ["Jeremy Hobbs"](#); ["Dr. Elisabeth A. Holland"](#); ["Greg Holland"](#); ["Brian Hoskins"](#); ["mhughes"](#); ["James Hurrell"](#); ["Ken Jackson"](#); ["c jakob"](#); ["Gardar Johannesson"](#); ["Philip D. Jones"](#); ["Helen Kang"](#); ["Thomas R Karl"](#); ["David Karoly"](#); ["Jeffrey Kiehl"](#); ["Steve Klein"](#); ["Knutti Reto"](#); ["John Lanzante"](#); [wily@ucar.edu](#); ["Ron Lehman"](#); ["John Lewis"](#); ["Steven A. Lloyd \(GSFC-610.2\) \[R S INFORMATION SYSTEMS INC\]"](#); ["Jane Long"](#); ["Janice Lough"](#); ["mann"](#); [emaurer@scu.edu](#); ["Linda Mearns"](#); ["carl mearns"](#); ["Jerry Meehl"](#); ["Jerry Melillo"](#); ["George Miller"](#); ["Norman Miller"](#); ["Art Mirin"](#); ["John FB Mitchell"](#); ["Phil Mote"](#); ["Neville Nicholls"](#); ["Gerald R. North"](#); ["Astrid E.J. Ogilvie"](#); ["Stephanie Ohshita"](#); ["Tim Osborn"](#); ["Stu Ostro"](#); ["j palutikof"](#); ["Joyce Penner"](#); ["Thomas C Peterson"](#); ["Tom Phillips"](#); ["David Pierce"](#); [plattner@ipcc.unibe.ch](#); ["V. Ramaswamy"](#); ["Veerabhadran Ramanathan"](#); ["Sarah Raper"](#); ["Phil Rasch"](#); ["Kathryn Rauhut"](#); ["Doug Rotman"](#); ["Terry L. Root"](#); ["Robert Sausen, DLR"](#); ["jsanter"](#); ["John Schellnhuber"](#); ["David Schimel"](#); ["Michael Schlesinger"](#); ["Gavin Schmidt"](#); ["Christina L. Schomer"](#); ["Lynda Seaver"](#); ["Dian J. Seidel"](#); ["Ted Sheppard"](#); ["s sherwood"](#); ["Adrian Simmons"](#); ["socci anthony"](#); ["brian soden"](#); ["Susan Solomon"](#); ["Ken Sperber"](#); ["Anne Stark"](#); ["Thomas Stocker"](#); ["Ronald J Stouffer"](#); [tswetnam@lrr.arizona.edu](#); ["Karl Taylor"](#); ["claudia tebaldi"](#); ["Joao P Teixeira"](#); ["Simon Tett"](#); ["Thomas A. Tombrello"](#); ["David Thompson"](#); ["Lonnie Thompson"](#); ["ELLEN THOMPSON"](#); ["Peter Thorne"](#); ["Mike Wallace"](#); ["Bud Ward"](#); ["David Warrillow \(GA\)"](#); ["Warren Washington"](#); ["Andrew Weaver"](#); ["Michael Wehner"](#); ["Frank Wentz"](#); ["Penny Whetton"](#); ["Dean N. Williams"](#); ["Gordon Yano"](#); ["Francis W. Zwiers"](#); ["Erik M Conway"](#); ["Sanjay Khanna"](#); ["Graham Cogley"](#); ["Jeffrey Kargel"](#); ["W. Crawford Elliott"](#); ["John Weyant"](#); ["Anthony Janetos"](#); ["Alison Sowden"](#); ["Vernon Squire"](#); ["Eric Garen"](#); ["Peter Cross"](#); ["Charles Zeller"](#); ["Ian Murdock"](#); ["Victoria A Arroyo"](#); ["Rashida Leonard"](#); ["Stephanie Fontenoy"](#); ["John Collee"](#); ["Sarah-jane Potts"](#); ["Greg Dutton"](#); ["Richard B. Rood"](#); ["Brien Seeley"](#); ["Mark Seeley"](#); ["Oliver Morton"](#); ["Cheryl H"](#); ["Richard Somerville"](#); ["Martin Heimann"](#); ["Don Kennedy"](#); ["Heidi Cullen"](#); ["Shari Bell"](#); ["Rebecca Bratspies"](#); ["Pete Myers"](#); ["Michael Oppenheimer"](#); ["Tom Wigley"](#); ["Naomi Oreskes"](#)  
**Subject:** RE: response from Ross McKittrick re: possible Exxon connection  
**Date:** Saturday, March 20, 2010 12:32:05 PM

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Stephen says:

Hate to join Tom in being the heavy here, everybody, but does it really matter so much? Sure, politically "follow the money" is the battle cry of investigative media and opponents of whoever someone wants to smear (rightly or wrongly), but McKittrick smears himself enough with bad climate science in my view we don't need much more to assign low confidence to his scientific credibility. If these oh so freedom loving supporters of hacked privacy think climate scientists express impolite and inappropriate frustrations to each other, but the oh-so-pure denier set doesn't, being saints of good scientific ethics of course, why don't they just volunteer to post all their private communications with each other over the past 10 years and we can compare their sainthood to our sinning. Wanna' bet who looks the dirtiest by FAR!!!

We are all busy, and I am glad some of you carved time out of that packed life to check the sources of support of the forces of darkness, but my cynical side thinks it won't much affect the debate really, since our being honest and increasingly confident based on evidence--now there's a new idea?!@#%-- hasn't tipped the debate yet to meaningful policy, so how is knowing how many laundered bucks he got going to create a social tipping point? Sure, if you learn something on this go for it, but don't expect much return on investment...A mega heat wave this summer is worth 3 orders of magnitude more in the PR wars--too bad we have to wait for random events since evidence doesn't seem to cut it anymore with the MSM (oh, sorry, jargon, main stream media).

Fight on folks, and maybe remember Bob Dylan's song from what, 40 years ago in my youth--still worth repeating:

Come Senators, Congressmen, please heed the call  
Don't block up the doorway, don't stand in the hall  
'Cause he that gets hurt will be he who has stalled  
'Cause the battle outside, raging

Will soon shake your windows and rattle your walls

'Cause the times they are a-changin'

--that is what we need to be focusing on: getting the times a-changin'--in time to avoid irreversibility in various systems. Not going to be quick or easy...

Cheers, Steve

=====

1) I don't think Tom is a heavy, nor John Houghton. I think they are both Good Guy Scientists, but Good Guy Scientists need to avoid both kinds of actions that give aid and comfort to the other side, i.e., either making difficult-to-prove accusations whose answers are mostly irrelevant, or not having quite the precise questions to ask ... and in any case, the answers are indeed generally irrelevant. (And of course I've talked to Stephen often enough to know he makes a bad heavy. :-))

2) The funding flow study is *for* Congressman & Senators (or their staffs, really), in the hope that there's even a .1% chance somebody will get serious and do an investigation. IF somebody thinks there is even a plausible 18USC1001 case to be made around the whole Wegman episode (and some lawyers have looked at this, and don't think it's fantasy), THEN the funding flow documentation offers a roadmap to roll *up* the machine that feeds CEI, GMI, etc. Put another way:

a) One can get distracted by trying to prove funding for any given individual.

b) BUT, if it turns out that there is a plausible case that persons (A, B, C,D, E, F...) have committed a crime, in a conspiracy (18USC371) to do so, then it seems plausible to ask those who funded them uncomfortable questions under oath. That means following the funding chains *backwards*, which is way more important than following them forwards. People like McKittrick are *symptoms*, not root causes, which is why I'd never spend a lot of time obsessing over a few \$K that might have come from Exxon. One of my wishful dreams would be to see Richard Mellon Scaife and the Kochs on the witness stand sometime, the way Waxman had the cigarette CEOs up there.

3) Of course, were any such thing to ever happen, subpoenas are *way better* than FOIA for prying loose emails. My report showed a few emails that happened to be around from earlier FOIAs, and they offer very good hints of more. Do *not* bet against Stephen regarding what would be found :-)

4) I've been taking a wonderful seminar course at Stanford run by Terry Root & Meg Caldwell, "Coping with Climate Change: Life after Copenhagen" with great speakers. Ben gave a fine, moving talk there earlier in the quarter. (Thanks again, Ben)

We finished with an interesting talk last Thursday by Stanford's Jon Krosnick, about polling results:

<http://woods.stanford.edu/research/majority-believe-global-warming.html>

There is both good news and bad news, and people really should consider looking at this. The good news will perk you up.

The bad news ... is the reason for going after the root causes, not just the symptoms. Specifically:

"Climate skeptics are having some effect on the public's belief that there is agreement among scientists that global warming is happening."

If you follow that, you get to some videos that Jon showed us Thursday:

<http://woods.stanford.edu/research/global-warming-skeptics.html>

"Consequences without skeptic" had an interview with none other than Stephen, and when people saw that, their attitudes became more reality-based.

But watch the short video "Consequences with skeptic", which adds on Hoover Institution *economist* Thomas Gale Moore (looking just like a sibling of Fred Singer, avuncular, reassuring, certain that more CO2 meant more plants, and we eat plants, so more CO2 is good, blah , blah)

That level of expertise was enough to cause confusion, in fact, *more than canceling* what Stephen had said. Anyway, watch the video and Jon's analysis. My one critique would be to see if it makes a difference which order the two are shown, since it's well-known that having the last word help.

I agree 100% with Stephen that it is a waste of time to worry about any little Exxon funding for any particular individual. What might help is throwing rocks into the gears of the machine that recruits, develops, supports, publicizes them, and makes sure they get "equal time" in the MSM. All that is much more relevant than occasional financial payments that might or might not have happened.

Of course, the next disaster will indeed help more, sigh.

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**Subject:** Re: response from Ross McKittrick re: possible Exxon connection  
**Date:** Friday, March 19, 2010 9:00:34 PM

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Cheers, Steve

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<williams13@llnl.gov>, "Gordon Yano" <yano1@llnl.gov>, "Francis W. Zwiers"  
<francis.zwiers@ec.gc.ca>, "Erik M' Conway" <erik.m.conway@jpl.nasa.gov>, "Sanjay Khanna"  
>, "Graham Cogley" <gcogley1@cogeco.ca>, "Jeffrey Kargel"  
, "W. Crawford Elliott" <geowce@langate.gsu.edu>, "John Weyant"  
<weyant@stanford.edu>, "Anthony Janetos" <anthony.janetos@pnl.gov>, "Alison' Sowden"  
>, "Vernon Squire" <vernon.squire@otago.ac.nz>, "Eric Garen"  
, "Peter Cross" <  
"Charles Zeller"  
, "Tan Murdock" <  
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<vaa@law.georgetown.edu>, "Rashida Leonard" <rleonard@law.berkeley.edu>, "Stephanie Fontenoy"  
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Rood" <rbrood@umich.edu>, "Brien Seeley" <  
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<mseeley@umn.edu>, "Oliver Morton" <  
"Cheryl\_H" <  
>, "Richard' Somerville" <rsomerville@ucsd.edu>,  
"Martin Heimann" <martin.heimann@bgc-jena.mpg.de>, "Don Kennedy" <kennedyd@stanford.edu>,  
"Heidi Cullen" <  
, "Shari Bell" <  
"Rebecca  
Bratspies" <bratspies@mail.law.cuny.edu>, "Pete Myers" <  
>, "Michael Oppenheimer"  
<omichael@princeton.edu>

Sent: Friday, March 19, 2010 5:58:58 PM GMT -08:00 US/Canada Pacific  
Subject: RE: response from Ross McKittrick re: possible Exxon connection

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MOST OF YOU WOULD LIKELY SKIP THIS (LONG) EMAIL, but if you talk to the press or otherwise opine publicly, or care to understand how the funding really works for climate anti-science, PLEASE READ ON. I have often counseled people to avoid over-emphasizing ExxonMobil (EM) and especially to avoid saying anything about direct payments from EM to "expert spokespeople", because they basically don't exist, as K.T. and N.O. said.

But even if they did exist, they are far less relevant than other money flows and structures.

All this properly belongs more to good investigative journalism, but the professionals there are less in evidence lately, leaving it to us amateurs to do what we can.

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OUTLINE:

- 0) EUPHEMISTIC NAMES
- 1) MONEY-LAUNDERING NET
- 2) FOUNDATIONS =\$\$=> THINK TANKS
- 3) THE MISSING MONEY, >50%
- 4) MONEY IS NOT THE ONLY CURRENCY ANYWAY, AND OFTEN NOT THE MOST IMPORTANT
- 5) MCKITRICK

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0) EUPHEMISTIC NAMES (says K.T.): for sure.

See "What's in a Name?" P.50.

"Foundation", "Institute", "Science" are popular. Many are tax-free 501(c)3s, but curiously located within a block of Washington's K Street (lobbyist central). Zoom in on:

<http://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>

Whether these 501(c)3's break any laws on lobbying limits is beyond me, and those laws are a bit vague. For sure, many of these \*seem\* like tax-free ways to do lobbying and PR.

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This has a \$\$\$-filled black cloud, through which exist an amazing variety of paths, but almost never direct from EM to spokespeople (the red box). That diagram oversimplifies, because sometimes money goes through Think Tanks to Fronts, or Fronts (especially trade associations like API (American Petroleum Institute, p.54) to Think tanks, and sometimes through PR agencies. There are other routes as well.

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This shows multi-year funding totals for various family foundations (of which the top-10 are especially relevant) and for the EM foundation (two separate analyses of the same thing). The table shows tobacco connections, \$ funding here, and nonprofit 501(c)3 or equivalent status elsewhere. CHC (Cooler Heads Coalition) is a front, run by CEI (Competitive Enterprise Institute), but whose members mostly are think tanks funded by the same foundations, so money flows are murky. For the Heartland conferences (Heart#1,#2,#3) cosponsors are marked, but one cannot tell whether they paid money to Heartland, or the reverse...

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I still don't really understand why they did it this way, since it made those numbers public, for which they have taken much flak. It seems likely that EM spends more money through API, through lobbyists, for political donations or directly to other organizations (but rarely to individual spokespeople). They have occasionally slipped:

For example (p.156), the well-remembered 2003 Soon & Baliunas Climate Research paper acknowledged:

"This scientific research was supported by generous grants from the Charles G. Koch Charitable Foundation, American Petroleum Institute, and Exxon-Mobil Corporation. The views expressed herein are solely those of the author and are independent of sources providing support." Yes, certainly :-)

SCAIFE (p.47-48)

The Allegheny, Carthage, and SSF (Sarah Scaife) Foundations are all run by Richard Mellon Scaife, i.e., includes Gulf Oil ==> Chevron money. Scaife's personal holdings (big) and any personal donations are unknown to me, but the published stock holdings of Carthage + SSF are highest for TOBACCO (\$29.3m) AND OIL-RELATED (\$28.4m). Oddly, Chevron (\$2.2M) is far outweighed by EM (\$22.6M).

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This started with White Star Oil. That leaves OLIN & BRADLEY foundations without obvious oil ties.

3) THE MISSING MONEY, >50%

By rummaging through most think tank's "990" forms, or summaries thereof, one can see their revenues, although rarely will they ever say anything about who gave them the money. One can compare that with the numbers from Foundation giving, and the difference is UNKNOWN.

One can do a simple "attribution analysis", p.46.

E: EM Foundation

F: Family Foundations, which have varying degrees of fossil-relatedness.

U: Unknown: could be direct from EM or other corporations, or individuals, or (retired EM executives given consulting money to be donated somewhere), or PR agencies, or intermediate foundations (like Atlas), or fronts, or industry associations.

Here are the percentages of 5 think tanks:

E, F, U:

16%, 0%, 84%: Annapolis Center

6%, 15%, 78%: CEI - Competitive Enterprise Institute

13%, 33%, 53%: CFACT; recent boost in funding not long before Morano arrived

9%, 55%, 36%: GMI - George C. Marshall Institute

2%, 10%, 87%: Heartland, huge boost in funding in last few years... but

UNKNOWN source.

BOTTOM LINE: we do NOT know where even half of their money really comes from, and the \*visible\* EM money is not a big piece of this. I do not know whether funds given to think tanks are targeted for specific projects or individuals, but the latter seem especially unlikely. I would bet that each year, fundees extol their accomplishments and abilities to potential funders, competing for (relatively small) amounts of money. They probably get checks categorized as "in support of sound science and education", or something like that.

[Why would I bet this? Well, such sorts of things show up in the Tobacco Archives, and many of these think tanks have tobacco connections. (p.68)]

Since 2001, GMI's CEO has been William O'keefe (p.144), an EM registered lobbyist in 2005, and a 25-veteran of the API. It is not unthinkable that the unknown GMI money might have a little oil in it, although there is likely some aerospace/defense money not found in many others.

CEI, CFACT, GMI and SEPP (Fred Singer's then-wife) were all involved in the 1998 GCSCT project (p.19-20, p.82)) organized by the API, and including attendance by Randy Randol (p.147), who some of you may know as the senior EM lobbyist who wrote to GWBush wishing to remove Bob Watson from IPCC, and replace Bierbaum & MacCracken with Christy and Lindzen.

I didn't do the Fraser Institute here; Deep Climate knows them much better, as does Donald Gutstein (reference [GUT2009][ on p.38]. They've gotten a little money from EM foundation, not much. Do they get money from Imperial Oil? (70%-owned by EM). I don't know.

4) MONEY IS NOT THE ONLY CURRENCY ANYWAY, AND OFTEN NOT THE MOST IMPORTANT

Figs 2.5-2.6, pp13-14 catalog reasons people might do anti-science only a few of which are directly financial. Of the many Heartland speakers, at least some probably never get asked to talk anywhere else (PSY3 - attention, publicity).

Notoriety may be a goal, or it may be an indirect way of making other money by selling books, having speaking invitations, other consulting, or just getting paid trips to speak for appreciative audiences.

(It actually seems slightly weird to have a bunch of very distinguished scientists worrying about relatively small money flows. All of you are easily smart enough to have made more money in careers other than science ... as was discovered by some of my Bell Labs colleagues when they left a downsizing BTL for Wall Street... If anybody knows that people do things for many reasons other than money, it should be you!)

In any case, I suspect EM pays lobbyists and PR agencies well. It gets terrific leverage from think tanks with relatively miniscule amounts of money, and rarely gives big consulting money directly to spokespeople,

because they are far more valuable if they can say "No EM money." Any why not? Scaife and Koch can be relied to help out, and the rest of the oil folks via API.

HENCE, even if one knew exact details of funding paths for some individual, it really doesn't mean much. What counts is the overall structure of Fig 2.1 (p.10), and that's what that money really goes for, I think. This structure is more complex than the early days of tobacco, and is very confusing, with multiple think tanks and fronts coming and going, and competing for funding, and cooperating otherwise. It would be astonishing if this were not on purpose...

Looking at one individual is a bit akin to obsession with one groundstation, but given the impetus:

#### 5) MCKITRICK

It is nontrivial to prove many indirect payments, but there are lots of plausible questions.

a) McKitrick (and McIntyre) did have trips paid to Washington via CEI or GMI.

How does one count being heavily promoted around Washington (Ebell (CEI) p.120, A.9.2, p.162, etc), and being introduced to Inhofe and being promoted by him? And later, Barton?

I have no idea how to place monetary value on that, but PR is worth something.

How often is such exposure available to Guelph professors?

How about getting written up on first page of WSJ?

b) He wrote that piece for CEI. Maybe there a few EM \$\$ there, but not many. I'd never make a big deal of that.

c) Of course, working with GMI means working with O'keefe, i.e., close to API & EM, which I actually consider more relevant than the EM portion of any possible small fees.

d) He became a GMI "expert" in 2004. That may well be unpaid, as many people sign up to be "advisors" or "Experts." He was also a Heartland Expert (HeartExp#1, p.97).

e) McKitrick in 2007 was the "Coordinator" for the ISPM produced by Fraser:

[http://www.fraserinstitute.org/COMMERCE.WEB/product\\_files/Independent%20Summary5.pdf](http://www.fraserinstitute.org/COMMERCE.WEB/product_files/Independent%20Summary5.pdf)

(Writers: D'Aleo, Khandekar, Kinninmonth, Essex, Karlen, Karner, Clark, Murty, O'Brien.

I really should have included that in my report).

This is a nicely-produced document. Did anyone get paid for this work? Who knows? It could be, or people might happily do it for free to keep their names out there.

f) Table A.6.2(a) Shows people versus activities. McKitrick spoke at the 2008 and 2009 Heartland conferences in NYC. Did he get any expenses paid? If so, where did that money come from? (That one is really murky).

f) He spoke at Helmer2009 (p.86) in Europe.

g) For more oil connections, see p.138.

Of the 4 think tanks he mentions there:

SPPI (p.74): ??, but SPPI's Rob Ferguson was EM-funded just before he

spunoff.

CO2Science (CSCDGC, p.57) some money from EM and SSF

Friends of Science (FoS) - Alberta oil

CEI - shown above.

h) See his short C.V:

<http://www.uoguelph.ca/~rmckitri/cv.html>

(his 2003 book with Essex) "was awarded the \$10,000 Donner Prize for Best Book on Canadian Public Policy." That sounds good...

"The annual Donner Awards, sponsored by the Donner Canadian Foundation and administered by the Fraser Institute,"

<http://www.fraserinstitute.org/newsandevents/news/6977.aspx>

"Professor McKittrick has been cited in media around the world as an expert on the science and policy of global warming. He has made invited academic presentations in Canada, the US and Europe, and has testified before the US Congress and the Canadian Parliamentary Finance and Environment Committees. In 2006 he was one of 12 experts from around the world asked to brief a panel of the US National Academy of Sciences on paleoclimate reconstruction methodology."

#### 5) SUMMARY

"X is paid by Exxon" is usually very unlikely, and it's unfortunately a fairly useless question that in fact, people would \*like\* to be asked, because they can say NO.

The money-laundering architecture is brilliantly designed, with only rare slipups.

a) Direct payments: almost never findable, if they exist at all.

b) Indirect payments for work, as Heartland paying \$140K to Fred Singer for NIPCC: sometimes.

c) Indirect payments for expenses, maybe speakers' fees: sometimes.

There are many more ways to steer money to somebody without leaving obvious tracks.

d) Hard-to-calibrate worth of publicity, contact, etc: very often, and very cost-effective, as "wish for attention" is a powerful motivator, and it is very cheap.

**From:** [John R. Mashey](#)  
**To:** ["Tom Wigley"](#); ["Naomi Oreskes"](#)  
**Cc:** [trenbert@ucar.edu](#); ["Thomas Crowley"](#); [santer1@lnl.gov](#); ["Dr. Krishna AchutaRao"](#); ["Myles Allen"](#); ["Natalia Andronova"](#); ["Tim C Atkinson"](#); ["Rick Anthes"](#); ["Caspar Ammann"](#); ["David C. Bader"](#); ["Tim Barnett"](#); ["Eric Barron"](#); ["Bench, Graham"](#); ["Pat Berge"](#); ["George Boer"](#); ["Celine J. W. Bonfils"](#); ["Bono, James A."](#); ["Boslough, Mark B"](#); ["James Boyle"](#); ["Ray Bradley"](#); ["Robin Bravender"](#); ["Keith Briffa"](#); ["Wolfgang Brueggemann"](#); ["Lisa Butler"](#); ["Ken Caldeira"](#); ["Peter Caldwell"](#); ["Dan Cayan"](#); ["Peter U. Clark"](#); ["Amy Clement"](#); ["Nancy Cole"](#); ["William Collins"](#); ["Tina Conrad"](#); ["Curtis Covey"](#); ["birte dar"](#); ["Davies Trevor Prof"](#); ["Jay Davis"](#); ["Tomas Diaz De La Rubia"](#); ["Andrew Dessler"](#); ["Dettinger, Michael"](#); ["Phil Duffy"](#); ["Ehlenbach, Paul J."](#); ["Kerry Emanuel"](#); ["James Estes"](#); ["Eyring, Veronika"](#); ["David Fahey"](#); ["Chris Field"](#); ["Peter Foukal"](#); ["Melissa Free"](#); ["Julio Friedmann"](#); ["Bill Fulkerson"](#); ["Inez Fung"](#); ["Jeff Garberson"](#); ["PETER GENT"](#); ["Nathan Gillett"](#); ["peter gleckler"](#); ["Bill Goldstein"](#); ["Hal Graboske"](#); ["Paul Gross"](#); ["Tom Guilderson"](#); ["Leopold Haimberger"](#); ["Alex Hall"](#); ["James Hansen"](#); ["harvey"](#); ["Klaus Hasselmann"](#); ["Susan Joy Hassol"](#); ["Gabi Hegerl"](#); ["Isaac Held"](#); ["Bob Hirschfeld"](#); ["Jeremy Hobbs"](#); ["Dr. Elisabeth A. Holland"](#); ["Greg Holland"](#); ["Brian Hoskins"](#); ["mhughes"](#); ["James Hurrell"](#); ["Ken Jackson"](#); ["c.jakob@bom.gov.au"](#); ["Gardar Johannesson"](#); ["Philip D. Jones"](#); ["Helen Kang"](#); ["Thomas R Karl"](#); ["David Karoly"](#); ["Jeffrey Kiehl"](#); ["Steve Klein"](#); ["Knutti Reto"](#); ["John Lanzante"](#); ["wily@ucar.edu"](#); ["Ron Lehman"](#); ["John Lewis"](#); ["Lloyd, Steven A. \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]"](#); ["Jane Long"](#); ["Janice Lough"](#); ["mann"](#); ["emaurer@scu.edu"](#); ["Linda Mearns"](#); ["carl mearns"](#); ["Jerry Meehl"](#); ["Jerry Melillo"](#); ["George Miller"](#); ["Norman Miller"](#); ["Art Mirin"](#); ["Mitchell, John FB"](#); ["Phil Mote"](#); ["Neville Nicholls"](#); ["Gerald R. North"](#); ["Astrid E.J. Ogilvie"](#); ["Stephanie Ohshita"](#); ["Tim Osborn"](#); ["Ostro, Stu"](#); ["j.palutikof@griffith.edu.au"](#); ["Joyce Penner"](#); ["Thomas C Peterson"](#); ["Tom Phillips"](#); ["David Pierce"](#); ["plattner@ipcc.unibe.ch"](#); ["V. Ramaswamy"](#); ["Ramanathan, Veerabhadran"](#); ["Sarah Raper"](#); ["Phil Rasch"](#); ["Kathryn Rauhut"](#); ["Doug Rotman"](#); ["Terry L. Root"](#); ["Sausen, Robert, DLR"](#); ["jsanter"](#); ["John Schellnhuber"](#); ["David Schimel"](#); ["Michael Schlesinger"](#); ["Gavin Schmidt"](#); ["Christina L. Schomer"](#); ["Stephen H Schneider"](#); ["Lynda Seaver"](#); ["Dian J. Seidel"](#); ["Ted Sheppard"](#); ["s.sherwood@unsw.edu.au"](#); ["Adrian Simmons"](#); ["socci.anthony@epa.gov"](#); ["brian soden"](#); ["Susan Solomon"](#); ["Ken Sperber"](#); ["Anne Stark"](#); ["Thomas Stocker"](#); ["Ronald J Stouffer"](#); ["tswetnam@ltr.arizona.edu"](#); ["Karl Taylor"](#); ["claudia tebaldi"](#); ["Teixeira, Joao P"](#); ["Simon Tett"](#); ["Tombrello, Thomas A."](#); ["David Thompson"](#); ["Lonnie Thompson"](#); ["ELLEN THOMPSON"](#); ["Thorne, Peter"](#); ["Mike Wallace"](#); ["Bud Ward"](#); ["Warrilow, David \(GA\)"](#); ["Warren Washington"](#); ["Andrew Weaver"](#); ["Michael Wehner"](#); ["Frank Wentz"](#); ["Whetton, Penny"](#); ["Dean N. Williams"](#); ["Gordon Yano"](#); ["Francis W. Zwiers"](#); ["Conway, Erik M"](#); ["Sanjay Khanna"](#); ["Graham Cogley"](#); ["Jeffrey Kargel"](#); ["W. Crawford Elliott"](#); ["John Weyant"](#); ["Anthony Janetos"](#); ["Sowden, Alison"](#); ["Vernon Squire"](#); ["Eric Garen"](#); ["Peter Cross"](#); ["Charles Zeller"](#); ["Ian Murdock"](#); ["Victoria A Arroyo"](#); ["Rashida Leonard"](#); ["Stephanie Fontenoy"](#); ["John Collee"](#); ["Sarah-jane Potts"](#); ["Greg Dutton"](#); ["Richard B. Rood"](#); ["Brien Seeley"](#); ["Mark Seeley"](#); ["Oliver Morton"](#); ["Cheryl H"](#); ["Somerville, Richard"](#); ["Martin Heimann"](#); ["Don Kennedy"](#); ["Heidi Cullen"](#); ["Shari Bell"](#); ["Rebecca Bratspies"](#); ["Pete Myers"](#); ["Michael Oppenheimer"](#)  
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16%, 0%, 84%: Annapolis Center

6%, 15%, 78%: CEI - Competitive Enterprise Institute

13%, 33%, 53%: CFACT; recent boost in funding not long before Morano arrived

9%, 55%, 36%: GMI - George C. Marshall Institute

2%, 10%, 87%: Heartland, huge boost in funding in last few years.... but UNKNOWN source.

BOTTOM LINE: we do NOT know where even half of their money really comes from, and the \*visible\* EM money is not a big piece of this. I do not know

whether funds given to think tanks are targeted for specific projects or individuals, but the latter seem especially unlikely. I would bet that each year, fundees extol their accomplishments and abilities to potential funders, competing for (relatively small) amounts of money. They probably get checks categorized as "in support of sound science and education", or something like that.

[Why would I bet this? Well, such sorts of things show up in the Tobacco Archives, and many of these think tanks have tobacco connections. (p.68)]

Since 2001, GMI's CEO has been William O'keefe (p.144), an EM registered lobbyist in 2005, and a 25-veteran of the API. It is not unthinkable that the unknown GMI money might have a little oil in it, although there is likely some aerospace/defense money not found in many others.

CEI, CFACT, GMI and SEPP (Fred Singer's then-wife) were all involved in the 1998 GCSCT project (p.19-20, p.82)) organized by the API, and including attendance by Randy Randol (p.147), who some of you may know as the senior EM lobbyist who wrote to GWBush wishing to remove Bob Watson from IPCC, and replace Bierbaum & MacCracken with Christy and Lindzen.

I didn't do the Fraser Institute here; Deep Climate knows them much better, as does Donald Gutstein (reference [GUT2009][ on p.38]. They've gotten a little money from EM foundation, not much. Do they get money from Imperial Oil? (70%-owned by EM). I don't know.

4) MONEY IS NOT THE ONLY CURRENCY ANYWAY, AND OFTEN NOT THE MOST IMPORTANT  
Figs 2.5-2.6, pp13-14 catalog reasons people might do anti-science only a few of which are directly financial. Of the many Heartland speakers, at least some probably never get asked to talk anywhere else (PSY3 - attention, publicity).

Notoriety may be a goal, or it may be an indirect way of making other money by selling books, having speaking invitations, other consulting, or just getting paid trips to speak for appreciative audiences.

(It actually seems slightly weird to have a bunch of very distinguished scientists worrying about relatively small money flows. All of you are easily smart enough to have made more money in careers other than science ... as was discovered by some of my Bell Labs colleagues when they left a downsizing BTL for Wall Street... If anybody knows that people do things for many reasons other than money, it should be you!)

In any case, I suspect EM pays lobbyists and PR agencies well. It gets terrific leverage from think tanks with relatively miniscule amounts of money, and rarely gives big consulting money directly to spokespeople, because they are far more valuable if they can say "No EM money." Any why not? Scaife and Koch can be relied to help out, and the rest of the oil folks via API.

HENCE, even if one knew exact details of funding paths for some individual, it really doesn't mean much. What counts is the overall structure of Fig 2.1 (p.10), and that's what that money really goes for, I think. This structure is more complex than the early days of tobacco, and is very confusing, with multiple think tanks and fronts coming and going, and competing for funding, and cooperating otherwise. It would be astonishing if this were not on purpose...

Looking at one individual is a bit akin to obsession with one groundstation, but given the impetus:

5) MCKITRICK

It is nontrivial to prove many indirect payments, but there are lots of plausible questions.

a) McKitrick (and McIntyre) did have trips paid to Washington via CEI or GMI.

How does one count being heavily promoted around Washington (Ebell (CEI) p.120, A.9.2, p.162, etc), and being introduced to Inhofe and being promoted by him? And later, Barton?

I have no idea how to place monetary value on that, but PR is worth something.

How often is such exposure available to Guelph professors?

How about getting written up on first page of WSJ?

b) He wrote that piece for CEI. Maybe there a few EM \$\$ there, but not many. I'd never make a big deal of that.

c) Of course, working with GMI means working with O'keefe, i.e., close to API & EM, which I actually consider more relevant than the EM portion of any possible small fees.

d) He became a GMI "expert" in 2004. That may well be unpaid, as many people sign up to be "advisors" or "Experts." He was also a Heartland Expert (HeartExp#1, p.97).

e) McKitrick in 2007 was the "Coordinator" for the ISPM produced by Fraser:  
[http://www.fraserinstitute.org/COMMERCE.WEB/product\\_files/Independent%20Summary5.pdf](http://www.fraserinstitute.org/COMMERCE.WEB/product_files/Independent%20Summary5.pdf)

(Writers: D'Aleo, Khandekar, Kinninmonth, Essex, Karlen, Karner, Clark, Murty, O'Brien.

I really should have included that in my report).

This is a nicely-produced document. Did anyone get paid for this work? Who knows? It could be, or people might happily do it for free to keep their names out there.

f) Table A.6.2(a) Shows people versus activities. McKitrick spoke at the 2008 and 2009 Heartland conferences in NYC. Did he get any expenses paid? If so, where did that money come from? (That one is really murky).

f) He spoke at Helmer2009 (p.86) in Europe.

g) For more oil connections, see p.138.

Of the 4 think tanks he mentions there:

SPPI (p.74): ??, but SPPI's Rob Ferguson was EM-funded just before he spunoff.

CO2Science (CSCDGC, p.57) some money from EM and SSF

Friends of Science (FoS) - Alberta oil

CEI - shown above.

h) See his short C.V:

<http://www.uoguelph.ca/~rmckitri/cv.html>

(his 2003 book with Essex) "was awarded the \$10,000 Donner Prize for Best Book on Canadian Public Policy." That sounds good...

"The annual Donner Awards, sponsored by the Donner Canadian Foundation and administered by the Fraser Institute,"

<http://www.fraserinstitute.org/newsandevents/news/6977.aspx>

"Professor McKitrick has been cited in media around the world as an expert on the science and policy of global warming. He has made invited academic

presentations in Canada, the US and Europe, and has testified before the US Congress and the Canadian Parliamentary Finance and Environment Committees. In 2006 he was one of 12 experts from around the world asked to brief a panel of the US National Academy of Sciences on paleoclimate reconstruction methodology."

#### 5) SUMMARY

"X is paid by Exxon" is usually very unlikely, and it's unfortunately a fairly useless question that in fact, people would \*like\* to be asked, because they can say NO.

The money-laundering architecture is brilliantly designed, with only rare slipups.

- a) Direct payments: almost never findable, if they exist at all.
- b) Indirect payments for work, as Heartland paying \$140K to Fred Singer for NIPCC: sometimes.
- c) Indirect payments for expenses, maybe speakers' fees: sometimes.  
There are many more ways to steer money to somebody without leaving obvious tracks.
- d) Hard-to-calibrate worth of publicity, contact, etc: very often, and very cost-effective, as "wish for attention" is a powerful motivator, and it is very cheap.

**From:** [Tom Wigley](#)  
**To:** [Naomi Oreskes](#)  
**Cc:** [trenbert@ucar.edu](#); [Thomas Crowley](#); [santer1@llnl.gov](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench, Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [Boslough, Mark B](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); ["Ken Caldeira"](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Dettlinger, Michael](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); ["Philip D. Jones"](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A. \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [emaurel@scu.edu](#); [Linda Mearns](#); [carl mearns](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Ostro, Stu](#); [j.palutikof@griffith.edu.au](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert, DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); ["Michael Schlesinger"](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Stephen H Schneider](#); [Lynda Seaver](#); ["Dian J. Seidel"](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](#); [Adrian Simmons](#); [socci.anthony@epa.gov](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Dean N. Williams](#); [Gordon Yano](#); ["Francis W. Zwiers"](#); [Conway, Erik M](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [Eric Garen](#); ["Peter Cross"](#); ["Charles Zeller"](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); ["Greg Dutton"](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Somerville, Richard](#); [Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#)  
**Subject:** Re: response from Ross McKittrick re: possible Exxon connection  
**Date:** Friday, March 19, 2010 12:23:36 PM

---

On the other hand, I presume that there is no evidence that McKittrick received any such indirect funds. So ... let us not simply \*assume\* guilt, which seems to be the tenor of some of these emails.

Tom.

+++++

Naomi Oreskes wrote:

- > Dear All,
- >
- > Kevin is right about this.
- >
- > Erik Conway and I talk about this in our forthcoming book; sociologist
- > Riley Dunlap has also researched it. There is a huge amount of
- > documentation also in the legacy tobacco documents about how the tobacco
- > industry did the same thing previously...These folks are nothing if not
- > clever.
- >
- > All best,
- > Naomi
- >
- > On Mar 16, 2010, at 8:31 AM, Kevin Trenberth wrote:
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- >> Tom
- >> Exxon seldom funds people directly it is always through other
- >> organizations with euphemistic sounding names.
- >> Kevin

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>>> below is my question, plus a prompt response from Ross McKittrick,  
>>> concerning this question  
>>>  
>>> his response is open and frank and I think it best to stop any further  
>>> discussion about this issue. tom crowley  
>>>  
>>>  
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>>> Dear Prof. McKittrick:  
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>>> I recently read a blog posting suggesting (but not demonstrating) that  
>>> you may have accepted consulting fees from Exxon.  
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>>> Could you please clarify for the record whether this is true?  
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>>> If so, could you please state how much consulting fees you obtained, and  
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>>> Thank you for your attention,  
>>>  
>>> Thomas Crowley  
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>>> Dear Prof. Crowley  
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>>> Thank you for asking and giving me the chance to address this. I have  
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>>>  
>>> Personally I have no objection to researchers obtaining industry funding  
>>> for their research, as long as they follow all the usual protocols to  
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>>> I am a Senior Fellow of the Fraser Institute in Vancouver BC. My  
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>>> required a budget were funded internally to avoid any appearance of  
>>> conflict of interest.

>>>  
>>> Cheers,  
>>> Ross McKittrick  
>>>  
>>> --  
>>> The University of Edinburgh is a charitable body, registered in  
>>> Scotland, with registration number SC005336.  
>>>  
>>  
>>  
>> \_\_\_\_\_  
>> Kevin Trenberth  
>> Climate Analysis Section, NCAR  
>> PO Box 3000  
>> Boulder CO 80307  
>> ph 303 497 1318  
>> <http://www.cgd.ucar.edu/cas/trenbert.html>  
>>

**From:** [Naomi Oreskes](#)  
**To:** [trenbert@ucar.edu](mailto:trenbert@ucar.edu)  
**Cc:** [Thomas Crowley](#); [santer1@llnl.gov](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [Boslough, Mark B](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); ["Ken Caldeira"](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte\\_dar](#); [Davies Trevor Prof](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Dettinger, Michael](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); ["Philip D. Jones"](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A.](#) (GSFC-610.2) [R S INFORMATION SYSTEMS INC]; [Jane Long](#); [Janice Lough](#); [mann](#); [emaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Ostro, Stu](#); [j.palutikof@griffith.edu.au](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert, DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); ["Michael Schlesinger"](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Stephen H Schneider](#); [Lynda Seaver](#); ["Dian J. Seidel"](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](#); [Adrian Simmons](#); [socci.anthony@epa.gov](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); ["Francis W. Zwiers"](#); [Conway, Erik M](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [Eric Garen](#); ["Peter Cross"](#); ["Charles Zeller"](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); ["Greg Dutton"](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Somerville, Richard](#); [Martin Heimann](#); [Don Kennedy](#); [Heidi Cullen](#); [Shari Bell](#); [Rebecca Bratspies](#); [Pete Myers](#); [Michael Oppenheimer](#)  
**Subject:** Re: response from Ross McKittrick re: possible Exxon connection  
**Date:** Friday, March 19, 2010 1:04:15 AM  
**Attachments:** [Merchants of Doubt dust cover 2010.pdf](#)  
[Untitled attachment 67213.txt](#)

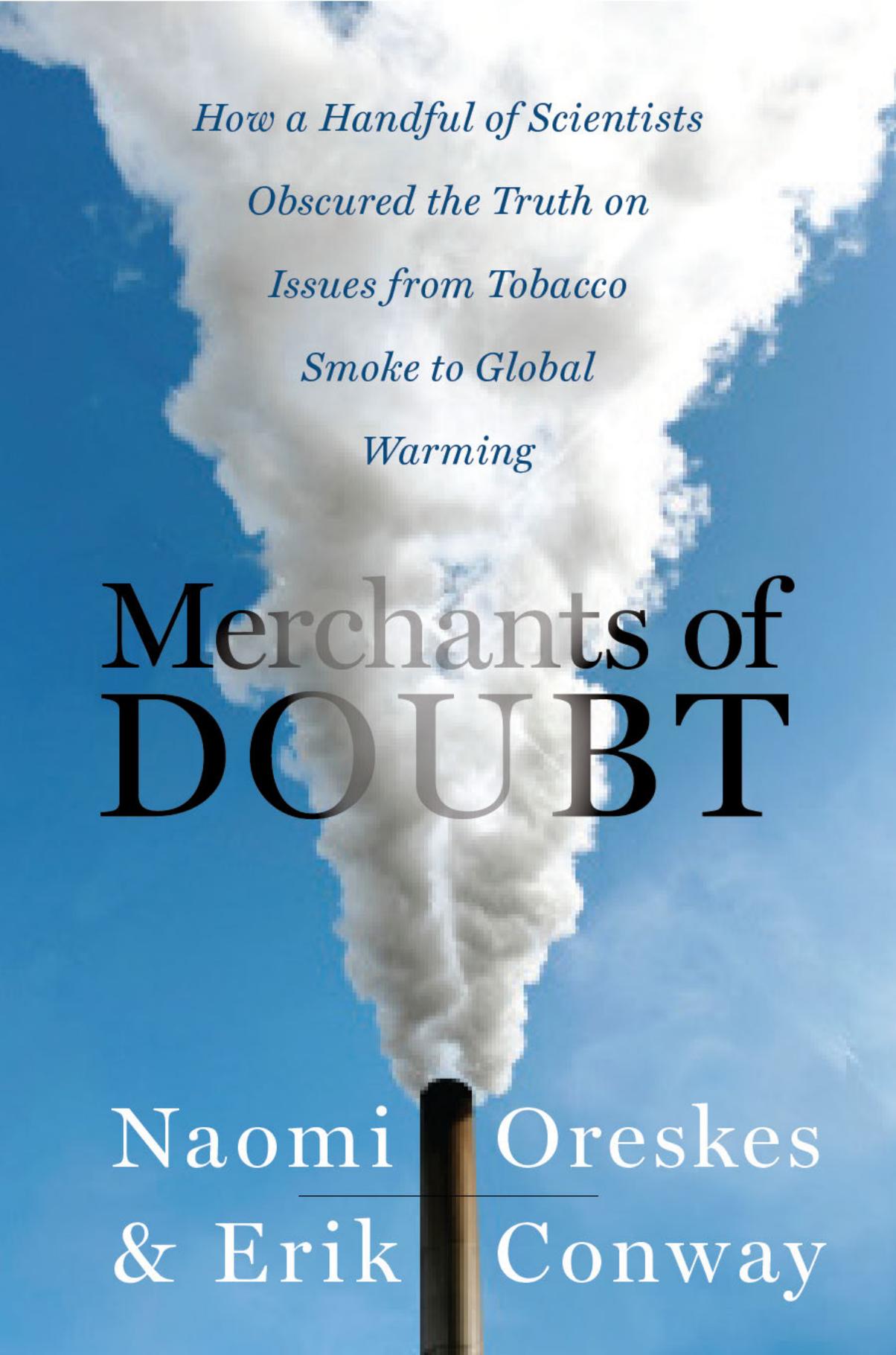
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*How a Handful of Scientists*

*Obscured the Truth on*

*Issues from Tobacco*

*Smoke to Global*

*Warming*

# Merchants of DOUBT

Naomi Oreskes  
& Erik Conway

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>> Cheers,  
>> Ross Mckitrick  
>>  
>> --  
>> The University of Edinburgh is a charitable body, registered in  
>> Scotland, with registration number SC005336.  
>>  
>  
>  
>  
> \_\_\_\_\_  
> Kevin Trenberth  
> Climate Analysis Section, NCAR  
> PO Box 3000  
> Boulder CO 80307  
> ph 303 497 1318  
> <http://www.cgd.ucar.edu/cas/trenbert.html>  
>

**From:** [Walter E. Baethgen](#)  
**To:** ["Andrew Dessler"](#); ["Fred Grinnell"](#); ["Stephan Jansch"](#); ["Andrew Light"](#); ["Aída Kemelmajer de Carlucci"](#); ["Francisco Meza"](#); ["Pimple, Kenneth"](#); ["Arturo Sanchez"](#); ["Janet Stemwedel"](#); ["Holm Tiessen"](#); [vainstok@retina.ar](mailto:vainstok@retina.ar); [carolina@cima.fcen.uba.ar](mailto:carolina@cima.fcen.uba.ar)  
**Subject:** FW: [Staff] The 5 characteristics of scientific denialism  
**Date:** Wednesday, March 17, 2010 8:22:28 PM

---

Could be useful for the PASI\_RCR course...

Regards,

Walter

---

**From:** staff-bounces@iri.columbia.edu [mailto:staff-bounces@iri.columbia.edu] **On Behalf Of** francesco fiordella  
**Sent:** Wednesday, March 17, 2010 8:19 PM  
**To:** staff@iri.columbia.edu  
**Subject:** [Staff] The 5 characteristics of scientific denialism

FYI:

A fascinating paper well worth reading is [Denialism: what is it and how should scientists respond? \(Diethelm & McKee 2009\)](#) (H/T to Jeremy Kemp for the heads-up). While the focus is on public health issues, it nevertheless establishes some useful general principles on the phenomenon of scientific denialism. A vivid example is the President of South Africa, Thabo Mbeki, who argued against the scientific consensus that HIV caused AIDS. This led to policies preventing thousands of HIV positive mothers in South Africa from receiving anti-retrovirals. It's estimated these policies led to the death of more than 330,000 lives ([Chigwedere 2008](#)). Clearly the consequences of denying science can be dire, even fatal.

The authors define denialism as "*the employment of rhetorical arguments to give the appearance of legitimate debate where there is none, an approach that has the ultimate goal of rejecting a proposition on which a scientific consensus exists*". They go on to identify 5 characteristics common to most forms of denialism:

- 1. Conspiracy theories**

When the overwhelming body of scientific opinion believes something is true, the denialist won't admit scientists have independently studied the evidence to reach the same conclusion. Instead, they claim scientists are engaged in a complex and secretive conspiracy. The South African government of Thabo Mbeki was heavily influenced by conspiracy theorists claiming that HIV was not the cause of AIDS. When such fringe groups gain the ear of policy makers who cease to base their decisions on science-based evidence, the human impact can be disastrous.

- 2. Fake experts**

These are individuals purporting to be experts but whose views are inconsistent with established knowledge. Fake experts have been used extensively by the tobacco industry who developed a strategy to recruit scientists who would counteract the growing evidence on the harmful effects of second-hand smoke. This tactic is often complemented by denigration of established experts, seeking to discredit their work.

Tobacco denialists have frequently attacked Stanton Glantz, professor of medicine at the University of California, for his exposure of tobacco industry tactics, labelling his research 'junk science'.

### 3. **Cherry picking**

This involves selectively drawing on isolated papers that challenge the consensus to the neglect of the broader body of research. An example is a paper describing intestinal abnormalities in 12 children with autism, which suggested a possible link with immunization. This has been used extensively by campaigners against immunization, even though 10 of the paper's 13 authors subsequently retracted the suggestion of an association.

### 4. **Impossible expectations of what research can deliver**

The tobacco company Philip Morris tried to promote a new standard for the conduct of epidemiological studies. These stricter guidelines would have invalidated in one sweep a large body of research on the health effects of cigarettes.

### 5. **Misrepresentation and logical fallacies**

Logical fallacies include the use of straw men, where the opposing argument is misrepresented, making it easier to refute. For example, the US Environmental Protection Agency (EPA) determined in 1992 that environmental tobacco smoke was carcinogenic. This was attacked as nothing less than a 'threat to the very core of democratic values and democratic public policy'.

Why is it important to define the tactics of denialism? Good faith discussion requires consideration of the full body of scientific evidence. This is difficult when confronted with rhetorical techniques which are designed to distort and distract. Identifying and publicly exposing these tactics are the first step in redirecting discussion back to a focus on the science.

This is not to say all global warming skeptic arguments employ denialist tactics. And it's certainly not advocating attacking peoples' motives. On the contrary, in most cases, focus on motives rather than methods is counterproductive. Here are some of the methods using denialist tactics in the climate debate:

#### 1. **Conspiracy theories**

Conspiracy theories have been growing in strength in recent months as [personal attacks on climate scientists](#) have intensified. In particular, there has been accusations of manipulation of temperature data with the result that "[the surface temperature record is unreliable](#)" has been the [most popular argument over the last month](#). This is distracting people from the [physical realities of global warming manifesting themselves all over the world](#). [Arctic sea-ice loss](#) is accelerating. Antarctic and Greenland ice sheets are [losing ice mass at an accelerating rate](#). Spring is coming earlier each year. Animal breeding and migration are changing in response. Distribution of plants are shifting to higher elevations. [Global sea level is rising](#). When one steps back to take in the full body of evidence, it overwhelmingly points to global warming.

#### 2. **Fake experts**

A [number of surveys and petitions](#) have been published online, presenting lengthy numbers of scientists who reject man-made global warming. Close inspection of these lists show very few qualifications in climate science. On the contrary, a survey of climate scientists who actively publish climate research found that [over 97% agree that human activity is significantly changing global temperature](#).

#### 3. **Cherry picking**

This usually involves a focus on a single paper to the neglect of the rest of peer-review

research. A recent example is the Lindzen-Choi paper that finds low climate sensitivity (around 0.5°C for doubled CO<sub>2</sub>). This neglects all the [research using independent techniques studying different time periods](#) that find our climate has high sensitivity (around 3°C for doubled CO<sub>2</sub>). This includes research using a similar approach to Lindzen-Choi but with more global coverage.

#### 4. **Impossible expectations**

The uncertainties of climate models are often used as an excuse to [reject any understanding that can come from climate models](#). Or worse, the uncertainty of climate models are used to reject all evidence of man-made global warming. This neglects the fact that there are [multiple lines of empirical evidence that humans are causing global warming](#).

#### 5. **Logical fallacies**

Strawmen arguments abound in the climate debate. Often have I heard skeptics argue "[CO<sub>2</sub> is not the only driver of climate](#)" which every climate scientist in the world would wholeheartedly agree with. A consideration of all the evidence tells us there are a number of factors that drive climate but currently, [CO<sub>2</sub> is the dominant forcing and also the fastest rising](#). Logical fallacies such as "[climate has changed before therefore current climate change must be natural](#)" are the equivalent of arguing that lightning has started bushfires in the past, therefore no modern bushfire is ever started by arsonists.

<http://www.skepticalscience.com/news.php?n=161>

**From:** [Ostro, Stu](#)  
**To:** [Thomas Crowley](#)  
**Cc:** [Boslough, Mark B](#); [santer1@llnl.gov](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench, Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [birte dar](#); [Davies Trevor Prof \(ENV\)](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Mike Dettinger](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth\(Beth\) A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A. \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [EMaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [j.palutikof@griffith.edu.au](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert, DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Stephen H Schneider](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](#); [Adrian Simmons](#); [succi.anthony@epa.gov](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@lrrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); [Kevin E. Trenberth](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Conway, Erik M](#); [Naomi Oreskes](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Ian Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Somerville](#); [Martin Heimann](#); [Don Kennedy](#); [Cheryl H](#); [Richard](#)  
**Subject:** RE: Two items: Skeptical Inquirer and APS  
**Date:** Tuesday, March 02, 2010 7:19:01 AM

Yes, we live in an age of soundbites in which five simple words -- "Global warming is a hoax" (or scam) -- can, for many people, especially in the context of Climategate/Glaciergate, have more influence on their point of view than the scientific statements of a whole squadron of organizations ...

Stu

(Senior meteorologist at The Weather Channel in Atlanta)

-----Original Message-----

From: Thomas Crowley [mailto:thomas.crowley@ed.ac.uk]  
Sent: Tuesday, March 02, 2010 4:17 AM  
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Bravender; Keith Briffa; Wolfgang Brueggemann; Lisa Butler; 'Ken Caldeira';  
Peter Caldwell; Dan Cayan; Peter U. Clark; Amy Clement; Nancy Cole; William  
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Haimberger; Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy  
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Mark,

it seems that a whole squadron of organizations - from the NAS to the AAAS to the AGU and the AMS - probably the Royal Society and the European Geophysical Society - have made their statements on climate change clear.

if someone chooses not to believe the most august scientific societies in the world, then there is not much that can be done about it - at least from the viewpoint of reason.

tom crowley

> Please forgive the "reply to all" but these two timely items may be of  
> general interest to this group.  
>  
>  
> 1) Skeptical Inquirer (the magazine for science and reason) deserves  
> your support:  
>  
> The March/April issue of Skeptical Inquirer has a cover theme on  
> "Climate Wars - Science and It's Disputers", with a feature article  
> "Disinformation about Global Warming" by David Morrison, two  
> commentaries (one by John Mashey and one by me), and a column "Climate  
> Denialism" by Massimo Pigliucci.  
>  
> The editor is taking some heat for running only pro-science pieces  
> without providing faux balance for anti-science denialists. There are  
> "situational skeptics" (people who are only skeptical of things they  
> don't want to believe) who are canceling their subscriptions. The  
> Skeptical Inquirer is supported by subscriptions, not by advertising.  
>  
> Please consider buying a copy at your newsstand and/or subscribing to  
> this magazine so that the loss of situational/conditional skeptics is  
> compensated by an increase in subscriptions by objective/scientific  
> (traditional) skeptics and it can maintain its viability and its  
> pro-science-and-reason editorial policy. Consider also writing a  
> letter to the editor so any uninformed criticism is balanced by more  
> informed commentary.  
>  
> 2) APS is soliciting member comments by March 19:  
>  
> I received the following message last week. If you are an APS  
> member, you may want to respond. If you are not an APS member but  
> have colleagues who are, you may want to pass this along as a reminder.  
>  
>  
> I am writing to request your attention to an important matter  
> regarding the 2007 APS Statement on Climate Change.  
>  
> An ad hoc subcommittee of the APS Panel on Public Affairs (POPA)  
> recently prepared a Commentary on the 2007 Statement in response to a  
> charge to POPA from the APS Council to "...review the 2007 APS Council

> Statement (07.1 Climate Change) with a view to addressing the issues  
> of clarity and tone raised in the report of the Kleppner committee" to  
> the APS president.  
>  
> You are invited to express your views on the proposed Commentary. It  
> will be available online for APS member input until March 19, 2010.  
> You may access the site using the link below. This link is exclusive  
> to you, and you may only submit comments one time. Once submitted,  
> your comments cannot be edited.  
>  
> Member comments will be reviewed by the POPA subcommittee and a final  
> version of the Commentary will be presented to the APS Council on  
> April 18, 2010. If approved by the APS Council, the finalized  
> Commentary will be included as an addendum to the existing APS  
> Statement on Climate Change.  
>  
> I want to thank members of the POPA subcommittee (Duncan Moore  
> (chair), John Browne, James Drake, and Frances Houle) for their work  
> in preparing the Commentary. I also wish to thank Robert Socolow  
> (Chair, POPA) and Francis Slakey (APS Assoc. Director of Public  
> Affairs) who were valuable resources to the subcommittee.  
>  
> Thank you in advance for your thoughtful participation in this  
> process. If you have any questions regarding the comment submission  
> process, please contact [webmaster@aps.org](mailto:webmaster@aps.org).  
>  
> Sincerely,  
> Curtis Callan  
> APS President  
>  
> \_\_\_\_\_  
>  
> Best regards,  
>  
> Mark Boslough  
>

--  
The University of Edinburgh is a charitable body, registered in  
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**From:** [Stephen H Schneider](#)  
**To:** [Mark B Boslough](#)  
**Cc:** [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Graham Bench](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [James A. Bono](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [Thomas Crowley](#); [birte.dar](#); [Davies Trevor Prof \(ENV\)](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Mike Dettinger](#); [Phil Duffy](#); [Paul J. Ehlenbach](#); [Kerry Emanuel](#); [James Estes](#); [Veronika Eyring](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth\(Beth\) A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob](#); [Gardar Johannesson](#); [Philip D. Jones](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Steven A. Lloyd \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [EMaurer@scu.edu](#); [Linda Mearns](#); [carl mearns](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [John FB Mitchell](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Stu Ostro](#); [j.palutikof](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Veerabhadran Ramanathan](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Robert Sausen, DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); [Michael Schlesinger](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Lynda Seaver](#); [Dian J. Seidel](#); [Ted Sheppard](#); [s.sherwood](#); [Adrian Simmons](#); [soggi anthony](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Joao P Teixeira](#); [Simon Tett](#); [Thomas A. Tombrello](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Peter Thorne](#); [Kevin E. Trenberth](#); [Mike Wallace](#); [Bud Ward](#); [David Warrilow \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Penny Whetton](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); [Francis W. Zwiers](#); [Erik M Conway](#); [Naomi Oreskes](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Alison Sowden](#); [Vernon Squire](#); [Eric Garen](#); [Peter Cross](#); [Charles Zeller](#); [Jan Murdock](#); [Victoria A Arroyo](#); [Rashida Leonard](#); [Stephanie Fontenoy](#); [John Collee](#); [Sarah-jane Potts](#); [Greg Dutton](#); [Richard B. Rood](#); [Brien Seeley](#); [Mark Seeley](#); [Oliver Morton](#); [Cheryl H](#); [Richard Somerville](#); [Martin Heimann](#); [Don Kennedy](#);  
[santer1@llnl.gov](#)  
**Subject:** Re: Two items: Skeptical Inquirer and APS  
**Date:** Tuesday, March 02, 2010 3:14:07 AM

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Thanks Mark, hi all. Would be very sad if your interesting publication were yet another victim of "skepticism" mislabeled by deniers. I deeply appreciated it last year when Ken Frazier correctly quoted me in SI on the difference between a real skeptic--all of us doing science--and a denier--one who does not accept a preponderance of evidence if any aspects are unknown. As we all know "exact science" is an oxymoron--but of course there are well-established parts not in need of priority rethinking. Nevertheless, we are almost always in the business of refinement of belief with evidence. But in systems science with few, if any, controlled experiments at scale, where it takes a community sometimes decades to collectively "falsify" some error--like the 4 groups and 20 years it took to show initial assessments of atmospheric cooling from satellite retrievals were based on subtle errors in the original work--we work on the basis of an accumulated preponderance of evidence, and then any new study--pushing that needle of preponderance one way or the other--doesn't push it very far until a careful and lengthy assessment is performed. So to me, we are all skeptics--as I was in 1971-73 when I "flipfopped" (as the deniers blogs daily label it) from cooling to warming and proudly published first what was wrong with my own early analysis (all recounted in chapter one of my new book, *Science as a Contact Sport*) or when my team at NCAR in 1985 took "Nuclear Winter" to Nuclear Autumn" (and I may soon go back again after latest works and move half way back to the original). That is skepticism--our pride and job. But to claim there is no preponderance of evidence when that is simply because systems science comes in well established, competing explanations and speculative bins, is not skepticism, but denial, pure and simple. The well-established still exists regardless of remaining uncertainties in the total story, as does the need not to overstate what is well known when what is well established is only part of the story. Proper assessment distinguishes between these categories and assesses confidence that can be had in each tentative conclusion given what is currently known--and that is often a subjective expert

group exercise, like at NAS or IPCC assessments--and requires extensive and broad-based peer review for evolving credibility. So you are hardly abandoning your proper focus on skepticism at SI by rejecting those who insist all details must be fully understood before one accepts some qualified conclusions conditional on the degree of confidence we can have in them based on the strength of the preponderance of evidence. So skeptics yea! deniers boo!!.

Glad you guys are there to keep up that proper scientific tradition. I fear the division of the country into two--to oversimplify--camps: doubt-test paradigm and faith-trust paradigm. Pretty irreconcilable and I'm afraid quite a big part of the fall of science these days in its influence in public discourse--shouting matches in climate change discussions half the time, a very dangerous state of non-communications. Overthrow of deep belief by accumulating evidence is pretty threatening to maybe half our fellow citizens, and it will not be an easy sell to turn that around anytime soon, whether on evolution or anthropogenic climate change--both beneficiaries of a strong preponderance of evidence, but not all details remotely known and some probably unknowable.

Good luck with it, it won't be easy either to get that subtle a message about the distinction between true skepticism and ideologically convenient denial through the media these days. Cheers anyway, Steve

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----- Original Message -----

From: "Mark B Boslough" <[mbboslo@sandia.gov](mailto:mbboslo@sandia.gov)>  
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Sent: Monday, March 1, 2010 10:02:19 PM GMT -08:00 US/Canada Pacific  
Subject: Two items: Skeptical Inquirer and APS

Please forgive the "reply to all" but these two timely items may be of general interest to this group.

1) Skeptical Inquirer (the magazine for science and reason) deserves your support:

The March/April issue of Skeptical Inquirer has a cover theme on "Climate Wars - Science and It's Disputers", with a feature article "Disinformation about Global Warming" by David Morrison, two commentaries (one by John Mashey and one by me), and a column "Climate Denialism" by Massimo Pigliucci.

The editor is taking some heat for running only pro-science pieces without providing faux balance for anti-science denialists. There are "situational skeptics" (people who are only skeptical of things they don't want to believe) who are canceling their subscriptions. The Skeptical Inquirer is supported by subscriptions, not by advertising.

Please consider buying a copy at your newsstand and/or subscribing to this magazine so that the loss of situational/conditional skeptics is compensated by an increase in subscriptions by objective/scientific (traditional) skeptics and it can maintain its viability and its pro-science-and-reason editorial policy.

Consider also writing a letter to the editor so any uninformed criticism is balanced by more informed commentary.

2) APS is soliciting member comments by March 19:

I received the following message last week. If you are an APS member, you may want to respond. If you are not an APS member but have colleagues who are, you may want to pass this along as a reminder.

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I am writing to request your attention to an important matter regarding the 2007 APS Statement on Climate Change.

An ad hoc subcommittee of the APS Panel on Public Affairs (POPA) recently prepared a Commentary on the 2007 Statement in response to a charge to POPA from the APS Council to "...review the 2007 APS Council Statement (07.1 Climate Change) with a view to addressing the issues of clarity and tone raised in the report of the Kleppner committee" to the APS president.

You are invited to express your views on the proposed Commentary. It will be available online for APS member input until March 19, 2010. You may access the site using the link below. This link is exclusive to you, and you may only submit comments one time. Once submitted, your comments cannot be edited.

Member comments will be reviewed by the POPA subcommittee and a final version of the Commentary will be presented to the APS Council on April 18, 2010. If approved by the APS Council, the finalized Commentary will be included as an addendum to the existing APS Statement on Climate Change.

I want to thank members of the POPA subcommittee (Duncan Moore (chair), John Browne, James Drake, and Frances Houle) for their work in preparing the Commentary. I also wish to thank Robert Socolow (Chair, POPA) and Francis Slakey (APS Assoc. Director of Public Affairs) who were valuable resources to the subcommittee.

Thank you in advance for your thoughtful participation in this process. If you have any questions regarding the comment submission process, please contact [webmaster@aps.org](mailto:webmaster@aps.org).

Sincerely,  
Curtis Callan  
APS President

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Best regards,

Mark Boslough

**From:** Simon Tett  
**To:** Thomas Crowley  
**Cc:** Boslough, Mark B; "santer1@lln.gov"; Dr. Krishna Achuta Rao; Myles Allen; Natalia Andronova; Tim C Atkinson; Rick Anthes; Caspar Ammann; David C. Bader; Tim Barnett; Eric Barron; Benck Graham; Pat Berge; George Boer; Celine J. W. Bonfils; Bono, James A.; James Boyle; Ray Bradley; Robin Bravender; Keith Briffa; Wolfgaang Brueggemann; Lisa Butler; "Ken Caldera"; Peter Caldwell; Dan Cayan; Peter U. Clark; Amy Clement; Nancy Cole; William Collins; Tina Conrad; Curtis Covey; bite.dar; Davies Trevor Prof (ENV); Jay Davis; Tomas Diaz De La Rubia; Andrew Dessler; Mike Dettinger; Phil Duffy; Eileenbach, Paul J.; Kerry Emanuel; James Estes; Eyring, Veronika; David Fahey; Chris Field; Peter Foukal; Melissa Free; Julia Friedmann; Bill Fulkerson; Inez Fung; Jeff Garberson; PETER GENTI; Nathan Gillett; peter gleckler; Bill Goldstein; Hal Graboske; Paul Gross; Tom Guilderson; Leopold Haimberger; Alex Hall; James Hansen; harvey; Klaus Hasselmann; Susan Joy Hassol; Gabi Heget; Isaac Held; Bob Hirschfeld; Jeremy Hobbs; Dr. Elisabeth(Beth) A. Holland; Greg Holland; Brian Hoskins; mhughes; James Hurrell; Ken Jackson; c.jakob@bom.gov.au; Gardar Johannesson; "Phillip D. Jones"; Helen Kang; Thomas R Karl; David Karoly; Jeffrey Kiehl; Steve Klein; Knutti Reto; John Lanzante; wily@ucar.edu; Ron Lehman; John Lewis; Lloyd, Steven A. (GSFC-610.2)R S INFORMATION SYSTEMS INC); Jane Long; Janice Lough; mann; EMaurer@scu.edu; Linda Mearns; carl mears; Jerry Meehl; Jerry Melillo; George Miller; Norman Miller; Art Mirin; Mitchell, John FB; Phil Mote; Neville Nicholls; Gerald R. North; Astrid E.J. Ogilvie; Stephanie Oshita; Tim Osborn; Ostro, Stu; j.palutikof@griffith.edu.au; Joyce Penner; Thomas C. Peterson; Tom Phillips; David Pierce; plattner@ipcc.unibe.ch; V. Ramanaswamy; Ramanathan, Veerabhadran; Sarah Raper; Phil Rasch; Kathryn Rauhut; Doug Rotman; Terry L. Root; Sausen, Robert. DLR; isanter; John Schellnhuber; David Schimel; "Michael Schlesinger"; Gavin Schmidt; Christina L. Schomer; Stephen H. Schneider; Lynda Seaver; "Dian J. Seidel"; Ted Sheppard; s.sherwood@unsw.edu.au; Adrian Simmons; socci.anthony@epa.gov; brian soden; Susan Solomon; Ken Spetler; Anne Stark; Thomas Stocker; Ronald J. Stouffer; iswetnam@tr.arizona.edu; Karl Taylor; claudia tebbaldi; Teixeira, Joao P.; Tomiello, Thomas A.; David Thompson; Lonnie Thompson; ELLEN THOMPSON; Thorne, Peter; "Kevin F. Trenberth"; Mike Wallace; Bud Ward; Warrilow, David (GA); Warren Washington; Andrew Weaver; Michael Wehner; Frank Wentz; Whetton, Penny; Tom Wigley; Dean N. Williams; Gordon Yano; "Francis W. Zwiers"; Conway, Erik M; Naomi Oreskes; Santjay Khanna; Graham Cooley; Jeffrey Kargel; W. Crawford Elliott; John Weyant; Anthony Janetos; Sowden, Alison; Vernon Squire; Eric Garen; "Peter Cross"; "Charles Zeller"; Ian Murdoch

**Subject:** Re: Mann Bites Dog: Why "Climategate" Was Newsworthy  
**Date:** Sunday, February 21, 2010 5:25:48 PM

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Hi Tom,  
I fear you forget how low an opinion the British public has of journalists -- somewhere below MP's....

Simon

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> Quoting "Boslough, Mark B" <mmboslo@sandia.gov>:

> Mark,

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>> Mann Bites Dog: Why 'Climategate' Was Newsworthy

>> Mark Boslough <http://www.cscicop.org/author/markboslough>

>> Volume 34.2, March / April

>> 2010 <http://www.cscicop.org/si/archive/category/volume\_34.2>

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>> Mann Bites Dog: Why 'Climategate' Was Newsworthy

>> Mark Boslough <blocked::http://www.cscicop.org/author/markboslough>

>> Volume 34.2, March / April

>> 2010 <blocked::http://www.cscicop.org/si/archive/category/volume\_34.2>

>>

>> When a dog bites a man, that is not news, because it happens so

>> often. But if a man bites a dog, that is news.

>>

>> -John D. Bogart

>>

>> As evidence for human-caused climate change has mounted, global

>> warming denialists have responded by blaming the messengers. Climate

>> researchers have endured abuse by bloggers, editorial writers, Fox

>> News pundits, and radio talk show hosts who have called them liars

>> and vilified them as frauds. The attacks had become increasingly vile

>> as the past decade, the hottest in human history, came to an end.

>> Angry activists have called for firings and criminal investigations,

>> and some prominent scientists have received physical threats.

>>

>> Politicians have also gotten into the act. In 2005, Sen. James Inhofe

>> (R-OK) referred to global warming as the "greatest hoax ever

>> perpetrated on the American people." Rep. Joe Barton (R-TX) sent a

>> harassing letter to Michael Mann (now a professor at Pennsylvania

>> State University) and his coauthors of the famous "hockey stick"

>> paleoclimate paper, demanding that they drop everything to provide

>> him with extensive documentation about what he claimed were

>> "methodological flaws and data errors" in their work.

>>

>> Denialists have attempted to call the science into question by

>> writing articles that include fabricated data. They've improperly

>> graphed data using tricks to hide evidence that contradicts their

>> beliefs. They chronically misrepresent the careful published work of

>> scientists, distorting all logic and meaning in an organized

>> misinformation campaign. To an uncritical media and gullible

>> non-scientists, this ongoing conflict has had the intended effect: it

>> gives the appearance of a scientific controversy and seems to

>> contradict climate researchers who have stated that the scientific

>> debate over the reality of human-caused climate change is over

>> (statements that have been distorted by denialists to imply the

>> ridiculous claim that in all respects "the science is settled").

>>

>> Science, however, has ground rules. Those who don't follow the rules

>> are entitled to their opinions but cannot legitimately claim to be

>> participating in a scientific debate. One rule that must be followed

>> for scientific results to be accepted is that they must be subjected

>> to review and published in a scholarly scientific journal. This is a

>> necessary but insufficient condition (nobody is compelled to accept

>> the conclusions of a paper just because it has been refereed).

>>

>> This rule is not intended to create a "high priesthood" of scientists

>> or keep others from participating. On the contrary, the culture of

>> science welcomes dissent and encourages contrarians to publish their

>> ideas so they can be subjected to the same scrutiny that is applied

>> to conventional thought.

>>

>> Peer review is designed to screen out material that is demonstrably



**From:** Thomas Crowley  
**To:** Boslough, Mark B  
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**Subject:** Re: Mann Bites Dog: Why "Climategate" Was Newsworthy  
**Date:** Saturday, February 20, 2010 9:55:49 AM

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Quoting "Boslough, Mark B" <mmboslo@sandia.gov>:

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 Scotland, with registration number SC005336.

**From:** [Naomi Oreskes](#)  
**To:** [Boslough, Mark B](#)  
**Cc:** ["santer1@lnl.gov"](#); [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [krisaydt@comcast.net](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench, Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); ["Ken Caldeira"](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [Thomas Crowley](#); [birte.dar](#); [Davies Trevor Prof \(ENV\)](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Dettinger, Michael](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth\(Beth\) A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); ["Philip D. Jones"](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A. \(GSFC-610.2\) \[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [EMaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Ostro, Stu](#); [j.palutikof@griffith.edu.au](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert](#); [DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); ["Michael Schlesinger"](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Stephen H Schneider](#); [Lynda Seaver](#); ["Dian J. Seidel"](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](#); [Adrian Simmons](#); [socci.anthony@epa.gov](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); ["Kevin E. Trenberth"](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); ["Francis W. Zwiers"](#); [Conway, Erik M](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [mash@heymash.com](#); [Eric Garen](#); ["Peter Cross"](#); ["Charles Zeller"](#); [Ian Murdock](#)  
**Subject:** Re: Mann Bites Dog: Why "Climategate" Was Newsworthy  
**Date:** Friday, February 19, 2010 3:32:58 PM

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Dear All

Jeffrey Sachs deals with this nicely in the Guardian and not incidentally makes a nice plug for my new book.

Here is the link: <http://www.project-syndicate.org/commentary/sachs163/English>

[All best](#)  
[Naomi](#)

On Feb 19, 2010, at 11:33 AM, Boslough, Mark B wrote:

[http://www.csicop.org/si/show/mann\\_bites\\_dog\\_why\\_climategate\\_was\\_newsworthy/](http://www.csicop.org/si/show/mann_bites_dog_why_climategate_was_newsworthy/)

**Mann Bites Dog: Why 'Climategate' Was Newsworthy**

[Mark Boslough](#)

**[Volume 34.2, March / April 2010](#)**

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**From:** [Boslough, Mark B](#)  
**To:** ["santer1@lnl.gov"](mailto:jsanter1@lnl.gov)  
**Cc:** [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench, Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); ["Ken Caldeira"](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [Thomas Crowley](#); [birte dar](#); [Davies Trevor Prof \(ENV\)](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Mike Dettinger](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth\(Beth\) A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); ["Philip D. Jones"](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A. \(GSFC-610.2\)\[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [EMaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Ostro, Stu](#); [j.palutikof@griffith.edu.au](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert, DLR](#); [jsanter](#); [John Schellhuber](#); [David Schimel](#); ["Michael Schlesinger"](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Stephen H Schneider](#); [Lynda Seaver](#); ["Dian J. Seidel"](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](#); [Adrian Simmons](#); [socci.anthony@epa.gov](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); ["Kevin E. Trenberth"](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); ["Francis W. Zwiers"](#); [Conway, Erik M](#); [Naomi Oreskes](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [Eric Garen](#); ["Peter Cross"](#); ["Charles Zeller"](#); [Ian Murdock](#)  
**Subject:** Mann Bites Dog: Why "Climategate" Was Newsworthy  
**Date:** Friday, February 19, 2010 1:34:05 PM

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[http://www.csicop.org/si/show/mann\\_bites\\_dog\\_why\\_climategate\\_was\\_newsworthy/](http://www.csicop.org/si/show/mann_bites_dog_why_climategate_was_newsworthy/)

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**From:** [Nielsen-Gammon, John W](#)  
**To:** [Andrew Dessler](#)  
**Cc:** [Katharine Hayhoe](#); [John Nielsen-Gammon](#); [Jerry North](#); [Rong Fu](#); [Jay Banner](#); [Charles Jackson](#); [andre@rice.edu](#); [n-g@tamu.edu](#)  
**Subject:** Re: op ed?  
**Date:** Thursday, February 18, 2010 11:07:31 AM

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Andy et al. -

I'm not prepared to sign on: I do not wish to engage in speculation about the Governor's motives or interests, nor do I wish to assume that the scope of the climategate scandal is limited to what we already know about it. But as a resource of climate information to the State, I'm willing to help anyone with an interest in climate. Embedded below are my comments.

- John

----- Original Message -----

From: Andrew Dessler <[adessler@tamu.edu](mailto:adessler@tamu.edu)>  
To: Katharine Hayhoe <[hayhoe@atmosresearch.com](mailto:hayhoe@atmosresearch.com)>, John Nielsen-Gammon <[n-g@tamu.edu](mailto:n-g@tamu.edu)>, Jerry North <[g-north@tamu.edu](mailto:g-north@tamu.edu)>, Rong Fu <[rongfu@jsg.utexas.edu](mailto:rongfu@jsg.utexas.edu)>, Jay Banner <[banner@mail.utexas.edu](mailto:banner@mail.utexas.edu)>, Charles Jackson <[charles@utig.ig.utexas.edu](mailto:charles@utig.ig.utexas.edu)>, [andre@rice.edu](mailto:andre@rice.edu)  
Sent: Thu, 18 Feb 2010 10:29:39 -0600 (CST)  
Subject: op ed?

here is a quick draft of an oped in response to Perry's challenge of the EPA's endangerment ruling. it's admittedly a bit harsh, and probably needs to be toned down --- but time is of the essence, so I wanted to circulate this to see who's interested in joining. let me know 1) if you want to join me, and, if so, 2) if you want to take a whack at editing it. I'd like to get something submitted this afternoon.

>>>>

One thing is perfectly clear about Gov. Perry and his administration: they are not interested in the science of climate change. The evidence was provided by Texas Atty. Gen. Greg Abbott, who admitted that the state had not consulted any climate scientists, including dozens here in the State, in putting together their appeal to the EPA. Instead, a reading of the footnotes in the challenge to the EPA reveal that the State relied mainly on British newspaper articles to support their contentions.

The reason for this is simple: the State's goal is to keep the focus not on the physics of the climate, but on whether climate scientists and the IPCC are corrupt. As a political strategy, this is brilliant. No one looks good when they are answering the question of when they stopped beating their wife or why they're not corrupt.

---

I don't think this is correct. I think that focusing on the corruption of the IPCC is a legal strategy. As their filing notes, the grounds for requesting reconsideration by the EPA must involve new information that emerged since last spring. This new information is twofold: the climategate emails, and the real or perceived IPCC errors. So that had to form the basis for their motion. Abbott says that he didn't see a need to talk to climate scientists because the legal issue at this point is not what the underlying science says, but the reliability of the IPCC.

I note also that it is a strategy rather than a goal. Their stated goal is to avoid federally-imposed regulations that would harm the Texas economy.

---

But as a road to good governance, this is a terrible strategy. Climate change is all about the science, and in 100 years people will not care what the UK scientists whose e-mails were stolen did or did not do --- what they will care about is whether the scientists were right about the connection between greenhouse gases and climate, and if the policymakers made wise decisions based on the best available science.

---

Rhetorically, you're lumping all scientists in with the climategate scientists here.

---

If the Governor had asked us what we thought, we would tell the Governor that, contrary to what he might read in British newspapers, the science of climate change is quite advanced in many areas. First, we are certain that adding carbon dioxide to the atmosphere will warm the planet. And recent work done by us at Texas A&M has demonstrated that the warming from carbon dioxide will increase the humidity of the atmosphere, which amplifies the warming from the carbon dioxide. If we do nothing to rein in emissions, we expect the globe will be several degrees warming by the end of the 21st century. And this could be bad for Texas.

Had the Governor asked us what we thought about the current controversy so prominently featured in British newspapers, we would have pointed out that the group in England whose e-mails were stolen works on just one small part of the overall climate change problem: the surface temperature record. And even in this part of climate

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The members of the close email circle implicated in alleged interference with journals and so forth includes scientists working not just on the surface temperature record (Jones), but also the paleo record (Mann), climate modeling (Wigley), etc.

---

change science, they make up only a small part. Two other groups, one at NASA and one at NOAA, analyze exactly the same data to produce equivalent temperature records, and they all agree. In addition, there is abundant ancillary data, such as receding glaciers, disappearing sea ice, rising oceans, or main oceans, and satellite measurements of temperature that all show the planet is warming.

Finally, we would have pointed out that all of the data suggests that temperatures did not warm much between 1998 and 2009 --- if there was a conspiracy afoot to fabricate climate data, why in the world would they fabricate a period of no warming? The answer, of course, is that there's no fabrication going on.

Ultimately, the laws of physics don't care about any of this political posturing. As if to make that point clear, recent measurements show that, while it may be cold in North America and Siberia, the rest of the world is sizzling hot. Satellite measurements show that January 2010 was the third hottest month in the satellite record, 0.04°C cooler than February and April 1998. If present trends continue, February will be the hottest month in both the satellite and surface temperature record --- and very likely the hottest month in several centuries.

---

And if it turns out that February is not the hottest month, it will be easy for critics to say that yet another dire prediction of climate alarmists did not come true.

---

The Governor may not believe climate science now, but as the Earth continues to warm, eventually he'll realize the experts were right.

--

Andrew Dessler  
Professor of Atmospheric Sciences  
Texas A&M University  
<http://atmo.tamu.edu/profile/ADessler>

--

John W. Nielsen-Gammon  
Professor and Texas State Climatologist  
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**From:** Ben Santer  
**To:** mbboslo@sandia.gov  
**Cc:** ; "William Fulkerson"; "Dr. Krishna AchutaRao"; "Myles Allen"; "Natasha Andronova"; "Tim C Atkinson"; "Rick Anthes"; "Caspar Ammann"; "David C. Bader"; "Tim Barnett"; "Eric Barron"; "Bench. Graham"; "Pat Berge"; "George Boer"; "Celine J. W. Bonfils"; "Bono, James A."; "James Boyle"; "Ray Bradley"; "Robin Bravender"; "Keith Briffa"; "Wolfgang Brueggemann"; "Lisa Butler"; "Ken Caldeira"; "Peter Caldwell"; "Dan Cayan"; "Peter U. Clark"; "Amy Clement"; "Nancy Cole"; "William Collins"; "Tina Conrad"; "Curtis Covey"; "Thomas Crowley"; "birte dar"; "Davies Trevor Prof (ENV)"; "Jay Davis"; "Tomas Diaz De La Rubia"; "Andrew Dessler"; "Mike Dettinger"; "Phil Duffy"; "Ehlenbach, Paul J."; "Kerry Emanuel"; "James Estes"; "Eyring, Veronika"; "David Fahey"; "Chris Field"; "Peter Foukal"; "Melissa Free"; "Julio Friedmann"; "Inez Fung"; "Jeff Garberson"; "PETER GENT"; "Nathan Gillett"; "peter gleckler"; "Bill Goldstein"; "Hal Graboske"; "Paul Gross"; "Tom Guilderson"; "Leopold Haimberger"; "Alex Hall"; "Jim Hanson"; "harvey"; "Klaus Hasselmann"; "Susan Joy Hassol"; "Gabi Hegerl"; "Isaac Held"; "Bob Hirschfeld"; "Jeremy Hobbs"; "Dr. Elisabeth (Beth) A. Holland"; "Greg Holland"; "Brian Hoskins"; "mhughes"; "James Hurrell"; "Ken Jackson"; "c.jakob@bom.gov.au"; "Gardar Johannesson"; "Philip D. Jones"; "Helen Kang"; "Thomas R Karl"; "David Karoly"; "Jeffrey Kiehl"; "Steve Klein"; "Knutti Reto"; "John Lanzante"; "wily@ucar.edu"; "Ron Lehman"; "John Lewis"; "Lloyd, Steven A. (GSFC-610.2) [R S INFORMATION SYSTEMS INC]"; "Jane Long"; "Janice Lough"; "mann"; "EMaurer@scu.edu"; "Linda Mearns"; "carl mearns"; "Jerry Meehl"; "Jerry Melillo"; "George Miller"; "Norman Miller"; "Art Mirin"; "Mitchell, John FB"; "Phil Mote"; "Neville Nicholls"; "Gerald R. North"; "Astrid E.J. Ogilvie"; "Stephanie Ohshita"; "Tim Osborn"; "Ostro, Stu"; "j.palutikof@griffith.edu.au"; "Joyce Penner"; "Thomas C Peterson"; "Tom Phillips"; "David Pierce"; "plattner@ipcc.unibe.ch"; "V. Ramaswamy"; "Ramanathan, Veerabhadran"; "Sarah Raper"; "Phil Rasch"; "Kathryn Rauhut"; "Doug Rotman"; "Terry L. Root"; "Sausen, Robert, DLR"; "isanter"; "John Schellnhuber"; "David Schimel"; "Michael Schlesinger"; "Gavin Schmidt"; "Christina L. Schomer"; "Steven Schneider"; "Lynda Seaver"; "Dian J. Seidel"; "Ted Sheppard"; "s.sherwood@unsw.edu.au"; "Adrian Simmons"; "soggi.anthony@epa.gov"; "brian soden"; "Susan Solomon"; "Ken Sperber"; "Anne Stark"; "Thomas Stocker"; "Ronald J Stouffer"; "tswetnam@ltrr.arizona.edu"; "Karl Taylor"; "claudia tebaldi"; "Teixeira, Joao P."; "Simon Tett"; "Tombrello, Thomas A."; "David Thompson"; "Lonnie Thompson"; "ELLEN THOMPSON"; "Thorne, Peter"; "Kevin E. Trenberth"; "Mike Wallace"; "Bud Ward"; "Warrilow, David (GA)"; "Warren Washington"; "Andrew Weaver"; "Michael Wehner"; "Frank Wentz"; "Whetton, Penny"; "Tom Wigley"; "Dean N. Williams"; "Gordon Yano"; "Francis W. Zwiers"; "Conway, Erik M"; "Naomi Oreskes"; "Sanjay Khanna"; "Graham Cogley"; "Jeffrey Kargel"; "W. Crawford Elliott"; "John Weyant"; "Anthony Janetos"; "Sowden, Alison"; "Vernon Squire"; "Eric Garen"; "Peter Cross"; "Charles Zeller"; "Ian Murdock"  
**Subject:** Re: Open Letter to the Climate Science Community: Response to "A Climatology Conspiracy?"  
**Date:** Tuesday, February 09, 2010 4:36:43 PM

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Dear Mark,

Many thanks for writing your op-ed. I deeply appreciate all the time and thought that went into crafting it. It is one of the best op-eds I have ever read.

I'd be grateful if you could keep me apprised as to the fate of your contribution. I hope the Albuquerque Journal publishes it in full.

Thanks also to John Mashey and "Deep Climate" for bringing some light into the darkness. Their efforts have helped to illuminate some of the folks throwing hockey pucks into the rink. I hope this leads to the detailed investigative reporting has been conspicuously absent from most "Climategate" stories.

In the last few months, we've heard much "sound and fury, signifying nothing". Those who have generated all the sound and fury are deserving of a little scrutiny of their own.

With best regards,

Ben

Mark Boslough wrote:

> Attached is an op-ed I've submitted to the Albuquerque Journal, inspired  
> by John Mashey's report.

>

> Regards,

>

> Mark Boslough

>  
> PS, needless to say, my opinions do not necessarily reflect those of my  
> employer, and I wrote this on my own time.

--

---

Benjamin D. Santer  
Program for Climate Model Diagnosis and Intercomparison  
Lawrence Livermore National Laboratory  
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Livermore, CA 94550, U.S.A.  
Tel: (925) 422-3840  
FAX: (925) 422-7675  
email: santer1@llnl.gov

---

**From:** [Mark Boslough](#)

**To:**

**Cc:** ["William Fulkerson"](#); ["Ben Santer"](#); ["Dr. Krishna AchutaRao"](#); ["Myles Allen"](#); ["Natasha Andronova"](#); ["Tim C Atkinson"](#); ["Rick Anthes"](#); ["Caspar Ammann"](#); [krisaydt@comcast.net](#); ["David C. Bader"](#); ["Tim Barnett"](#); ["Eric Barron"](#); ["Bench. Graham"](#); ["Pat Berge"](#); ["George Boer"](#); ["Celine J. W. Bonfils"](#); ["Bono, James A."](#); ["James Boyle"](#); ["Ray Bradley"](#); ["Robin Bravender"](#); ["Keith Briffa"](#); ["Wolfgang Brueggemann"](#); ["Lisa Butler"](#); ["Ken Caldeira"](#); ["Peter Caldwell"](#); ["Dan Cayan"](#); ["Peter U. Clark"](#); ["Amy Clement"](#); ["Nancy Cole"](#); ["William Collins"](#); ["Tina Conrad"](#); ["Curtis Covey"](#); ["Thomas Crowley"](#); ["birte dar"](#); ["Davies Trevor Prof \(ENV\)"](#); ["Jay Davis"](#); ["Tomas Diaz De La Rubia"](#); ["Andrew Dessler"](#); ["Mike Dettinger"](#); ["Phil Duffy"](#); ["Ehlenbach, Paul J."](#); ["Kerry Emanuel"](#); ["James Estes"](#); ["Eyring, Veronika"](#); ["David Fahey"](#); ["Chris Field"](#); ["Peter Foukal"](#); ["Melissa Free"](#); ["Julio Friedmann"](#); ["Inez Fung"](#); ["Jeff Garberson"](#); ["PETER GENT"](#); ["Nathan Gillett"](#); ["peter gleckler"](#); ["Bill Goldstein"](#); ["Hal Graboske"](#); ["Paul Gross"](#); ["Tom Guilderson"](#); ["Leopold Haimberger"](#); ["Alex Hall"](#); ["Jim Hanson"](#); ["harvey"](#); ["Klaus Hasselmann"](#); ["Susan Joy Hassol"](#); ["Gabi Hegerl"](#); ["Isaac Held"](#); ["Bob Hirschfeld"](#); ["Jeremy Hobbs"](#); ["Dr. Elisabeth\(Beth\) A. Holland"](#); ["Greg Holland"](#); ["Brian Hoskins"](#); ["mhughes"](#); ["James Hurrell"](#); ["Ken Jackson"](#); ["c.jakob@bom.gov.au"](#); ["Gardar Johannesson"](#); ["Philip D. Jones"](#); ["Helen Kang"](#); ["Thomas R. Karl"](#); ["David Karoly"](#); ["Jeffrey Kiehl"](#); ["Steve Klein"](#); ["Knutti Reto"](#); ["John Lanzante"](#); ["wily@ucar.edu"](#); ["Ron Lehman"](#); ["John Lewis"](#); ["Lloyd, Steven A. \(GSFC-610.2\) \[R S INFORMATION SYSTEMS INC\]"](#); ["Jane Long"](#); ["Janice Lough"](#); ["mann"](#); ["EMaurer@scu.edu"](#); ["Linda Mearns"](#); ["carl mearns"](#); ["Jerry Meehl"](#); ["Jerry Melillo"](#); ["George Miller"](#); ["Norman Miller"](#); ["Art Mirin"](#); ["Mitchell, John FB"](#); ["Phil Mote"](#); ["Neville Nicholls"](#); ["Gerald R. North"](#); ["Astrid E.J. Ogilvie"](#); ["Stephanie Ohshita"](#); ["Tim Osborn"](#); ["Ostro, Stu"](#); ["j.palutikof@griffith.edu.au"](#); ["Joyce Penner"](#); ["Thomas C Peterson"](#); ["Tom Phillips"](#); ["David Pierce"](#); ["plattner@ipcc.unibe.ch"](#); ["V. Ramaswamy"](#); ["Ramanathan, Veerabhadran"](#); ["Sarah Raper"](#); ["Phil Rasch"](#); ["Kathryn Rauhut"](#); ["Doug Rotman"](#); ["Terry L. Root"](#); ["Sausen, Robert, DLR"](#); ["isanter"](#); ["John Schellnhuber"](#); ["David Schimel"](#); ["Michael Schlesinger"](#); ["Gavin Schmidt"](#); ["Christina L. Schomer"](#); ["Steven Schneider"](#); ["Lynda Seaver"](#); ["Dian J. Seidel"](#); ["Ted Sheppard"](#); ["s.sherwood@unsw.edu.au"](#); ["Adrian Simmons"](#); ["soggi.anthony@epa.gov"](#); ["brian soden"](#); ["Susan Solomon"](#); ["Ken Sperber"](#); ["Anne Stark"](#); ["Thomas Stocker"](#); ["Ronald J Stouffer"](#); ["tswetnam@ltrr.arizona.edu"](#); ["Karl Taylor"](#); ["claudia tebaldi"](#); ["Teixeira, Joao P."](#); ["Simon Tett"](#); ["Tombrello, Thomas A."](#); ["David Thompson"](#); ["Lonnie Thompson"](#); ["ELLEN THOMPSON"](#); ["Thorne, Peter"](#); ["Kevin E. Trenberth"](#); ["Mike Wallace"](#); ["Bud Ward"](#); ["Warrilow, David \(GA\)"](#); ["Warren Washington"](#); ["Andrew Weaver"](#); ["Michael Wehner"](#); ["Frank Wentz"](#); ["Whetton, Penny"](#); ["Tom Wigley"](#); ["Dean N. Williams"](#); ["Gordon Yano"](#); ["Francis W. Zwiers"](#); ["Conway, Erik M"](#); ["Naomi Oreskes"](#); ["Sanjay Khanna"](#); ["Graham Cogley"](#); ["Jeffrey Kargel"](#); ["W. Crawford Elliott"](#); ["John Weyant"](#); ["Anthony Janetos"](#); ["Sowden, Alison"](#); ["Vernon Squire"](#); ["Eric Garen"](#); ["Peter Cross"](#); ["Charles Zeller"](#); ["Ian Murdock"](#)

**Subject:** Re: Open Letter to the Climate Science Community: Response to "A Climatology Conspiracy?"

**Date:** Tuesday, February 09, 2010 3:17:23 PM

**Attachments:** [Clusterpucked.docx](#)

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Attached is an op-ed I've submitted to the Albuquerque Journal, inspired by John Mashey's report.

Regards,

Mark Boslough

PS, needless to say, my opinions do not necessarily reflect those of my employer, and I wrote this on my own time.

**From:** [William Fulkerson](#)  
**To:** [Ben Santer](#)  
**Cc:** [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natasha Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench, Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [Boslough, Mark B](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); [Ken Caldeira](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [Thomas Crowley](#); [birte dar](#); [Davies Trevor Prof \(ENV\)](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Mike Dettinger](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [Jim Hanson](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth\(Beth\) A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); ["Philip D. Jones"](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A. \(GSFC-610.2\) \[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [EMaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Ostro, Stu](#); [j.palutikof@griffith.edu.au](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert, DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); ["Michael Schlesinger"](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Steven Schneider](#); [Lynda Seaver](#); ["Dian J. Seidel"](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](#); [Adrian Simmons](#); [socci.anthony@epa.gov](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); ["Kevin E. Trenberth"](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); ["Francis W. Zwiers"](#); [Conway, Erik M](#); [Naomi Oreskes](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [mash@heymash.com](#); [Eric Garen](#); ["Peter Cross"](#); ["Charles Zeller"](#); [Ian Murdock](#)  
**Subject:** Re: Open Letter to the Climate Science Community: Response to "A Climatology Conspiracy?"  
**Date:** Thursday, February 04, 2010 7:51:12 AM

---

Dear Ben:

Thank you for copying me with your remarkable letter. You paint a story that is amazing and very carefully told. I believe you have followed the right path in sending the letter out. It is sad that this was necessary, but finding the truth is often painful.

With best regards,

Bill

Bill Fulkerson, Senior Fellow and LERDWG Chair  
Institute for a Secure and Sustainable Environment  
University of Tennessee  
311 Conference Center Bldg.  
Knoxville, TN 37996-4138  
wfulk@utk.edu  
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2781 Wheat Road, Lenoir City, TN 37771-

On 2/4/10 12:31 AM, "Ben Santer" <santer1@llnl.gov> wrote:

- > Dear colleagues and friends,
- >
- > This is the third open letter to the climate science community that I
- > have written in the aftermath of "Climategate" - the theft of over 1,000
- > emails from the U.K.'s Climatic Research Unit.
- >
- > In my two previous letters, I defended scientific colleagues who have
- > been affected by "Climategate". In the current open letter, I am

> defending myself against serious (and unfounded) allegations of  
> professional misconduct. These allegations were made in December 2009 by  
> Professor David Douglass and Professor John Christy. The allegations are  
> based on selective interpretation of some of the emails stolen from the  
> Climatic Research Unit.

>

> It appears that the Douglass and Christy allegations will soon become  
> the subject of media scrutiny. Having recently witnessed a number of  
> disturbing examples of less-than-responsible reporting on "Climategate",  
> I have decided to be proactive in my own defense, and to release this  
> third open letter. The letter is appended as a .pdf file  
> ("SanterOpenLetter3\_v5.pdf"). Feel free to distribute the letter and the  
> two attachments ("APPENDIX\_A.pdf" and "santer\_IJoC\_published\_2008.pdf")  
> as you see fit.

>

> I would like to emphasize that the appended remarks represent my own  
> personal opinions, and are not official positions of either the U.S.  
> Dept. of Energy or of Lawrence Livermore National Lab.

>

> If any of you feel uncomfortable remaining on this email distribution  
> list, please let me know, and I'll remove your name immediately.

>

> With best regards,

>

> Ben Santer

>

> -----

> Benjamin D. Santer  
> Program for Climate Model Diagnosis and Intercomparison  
> Lawrence Livermore National Laboratory  
> P.O. Box 808, Mail Stop L-103  
> Livermore, CA 94550, U.S.A.  
> Tel: (925) 422-3840  
> FAX: (925) 422-7675  
> email: santer1@llnl.gov

> -----

>

**From:** [Ben Santer](#)  
**To:** [santer1@lnl.gov](mailto:santer1@lnl.gov)  
**Cc:** [Dr. Krishna AchutaRao](#); [Myles Allen](#); [Natalia Andronova](#); [Tim C Atkinson](#); [Rick Anthes](#); [Caspar Ammann](#); [David C. Bader](#); [Tim Barnett](#); [Eric Barron](#); [Bench, Graham](#); [Pat Berge](#); [George Boer](#); [Celine J. W. Bonfils](#); [Bono, James A.](#); [Boslough, Mark B](#); [James Boyle](#); [Ray Bradley](#); [Robin Bravender](#); [Keith Briffa](#); [Wolfgang Brueggemann](#); [Lisa Butler](#); ["Ken Caldeira"](#); [Peter Caldwell](#); [Dan Cayan](#); [Peter U. Clark](#); [Amy Clement](#); [Nancy Cole](#); [William Collins](#); [Tina Conrad](#); [Curtis Covey](#); [Thomas Crowley](#); [birte dar](#); [Davies Trevor](#); [Prof \(ENV\)](#); [Jay Davis](#); [Tomas Diaz De La Rubia](#); [Andrew Dessler](#); [Mike Dettinger](#); [Phil Duffy](#); [Ehlenbach, Paul J.](#); [Kerry Emanuel](#); [James Estes](#); [Eyring, Veronika](#); [David Fahey](#); [Chris Field](#); [Peter Foukal](#); [Melissa Free](#); [Julio Friedmann](#); [Bill Fulkerson](#); [Inez Fung](#); [Jeff Garberson](#); [PETER GENT](#); [Nathan Gillett](#); [peter gleckler](#); [Bill Goldstein](#); [Hal Graboske](#); [Paul Gross](#); [Tom Guilderson](#); [Leopold Haimberger](#); [Alex Hall](#); [James Hansen](#); [harvey](#); [Klaus Hasselmann](#); [Susan Joy Hassol](#); [Gabi Hegerl](#); [Isaac Held](#); [Bob Hirschfeld](#); [Jeremy Hobbs](#); [Dr. Elisabeth\(Beth\) A. Holland](#); [Greg Holland](#); [Brian Hoskins](#); [mhughes](#); [James Hurrell](#); [Ken Jackson](#); [c.jakob@bom.gov.au](#); [Gardar Johannesson](#); ["Philip D. Jones"](#); [Helen Kang](#); [Thomas R Karl](#); [David Karoly](#); [Jeffrey Kiehl](#); [Steve Klein](#); [Knutti Reto](#); [John Lanzante](#); [wily@ucar.edu](#); [Ron Lehman](#); [John Lewis](#); [Lloyd, Steven A.](#) ([GSFC-610.2](#))[\[R S INFORMATION SYSTEMS INC\]](#); [Jane Long](#); [Janice Lough](#); [mann](#); [EMaurer@scu.edu](#); [Linda Mearns](#); [carl mears](#); [Jerry Meehl](#); [Jerry Melillo](#); [George Miller](#); [Norman Miller](#); [Art Mirin](#); [Mitchell, John FB](#); [Phil Mote](#); [Neville Nicholls](#); [Gerald R. North](#); [Astrid E.J. Ogilvie](#); [Stephanie Ohshita](#); [Tim Osborn](#); [Ostro, Stu](#); [j.palutikof@griffith.edu.au](#); [Joyce Penner](#); [Thomas C Peterson](#); [Tom Phillips](#); [David Pierce](#); [plattner@ipcc.unibe.ch](#); [V. Ramaswamy](#); [Ramanathan, Veerabhadran](#); [Sarah Raper](#); [Phil Rasch](#); [Kathryn Rauhut](#); [Doug Rotman](#); [Terry L. Root](#); [Sausen, Robert, DLR](#); [jsanter](#); [John Schellnhuber](#); [David Schimel](#); ["Michael Schlesinger"](#); [Gavin Schmidt](#); [Christina L. Schomer](#); [Stephen H Schneider](#); [Lynda Seaver](#); ["Dian J. Seidel"](#); [Ted Sheppard](#); [s.sherwood@unsw.edu.au](#); [Adrian Simmons](#); [socci.anthony@epa.gov](#); [brian soden](#); [Susan Solomon](#); [Ken Sperber](#); [Anne Stark](#); [Thomas Stocker](#); [Ronald J Stouffer](#); [tswetnam@ltrr.arizona.edu](#); [Karl Taylor](#); [claudia tebaldi](#); [Teixeira, Joao P](#); [Simon Tett](#); [Tombrello, Thomas A.](#); [David Thompson](#); [Lonnie Thompson](#); [ELLEN THOMPSON](#); [Thorne, Peter](#); ["Kevin E. Trenberth"](#); [Mike Wallace](#); [Bud Ward](#); [Warrilow, David \(GA\)](#); [Warren Washington](#); [Andrew Weaver](#); [Michael Wehner](#); [Frank Wentz](#); [Whetton, Penny](#); [Tom Wigley](#); [Dean N. Williams](#); [Gordon Yano](#); ["Francis W. Zwiers"](#); [Conway, Erik M](#); [Naomi Oreskes](#); [Sanjay Khanna](#); [Graham Cogley](#); [Jeffrey Kargel](#); [W. Crawford Elliott](#); [John Weyant](#); [Anthony Janetos](#); [Sowden, Alison](#); [Vernon Squire](#); [Eric Garen](#); ["Peter Cross"](#); ["Charles Zeller"](#); [Ian Murdock](#)  
**Subject:** Open Letter to the Climate Science Community: Response to "A Climatology Conspiracy?"  
**Date:** Wednesday, February 03, 2010 11:32:11 PM  
**Attachments:** [SanterOpenLetter3\\_v5.pdf](#)  
[APPENDIX\\_A.pdf](#)  
[santer\\_IJoC\\_published\\_2008.pdf](#)

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Dear colleagues and friends,

This is the third open letter to the climate science community that I have written in the aftermath of "Climategate" - the theft of over 1,000 emails from the U.K.'s Climatic Research Unit.

In my two previous letters, I defended scientific colleagues who have been affected by "Climategate". In the current open letter, I am defending myself against serious (and unfounded) allegations of professional misconduct. These allegations were made in December 2009 by Professor David Douglass and Professor John Christy. The allegations are based on selective interpretation of some of the emails stolen from the Climatic Research Unit.

It appears that the Douglass and Christy allegations will soon become the subject of media scrutiny. Having recently witnessed a number of disturbing examples of less-than-responsible reporting on "Climategate", I have decided to be proactive in my own defense, and to release this third open letter. The letter is appended as a .pdf file ("SanterOpenLetter3\_v5.pdf"). Feel free to distribute the letter and the two attachments ("APPENDIX\_A.pdf" and "santer\_IJoC\_published\_2008.pdf") as you see fit.

I would like to emphasize that the appended remarks represent my own personal opinions, and are not official positions of either the U.S. Dept. of Energy or of Lawrence Livermore National Lab.

If any of you feel uncomfortable remaining on this email distribution

February 3, 2010

**Response to “*A Climatology Conspiracy?*”**

B.D. Santer

Program for Climate Model Diagnosis and Intercomparison

Lawrence Livermore National Lab

Livermore, CA 94550

# Consistency of modelled and observed temperature trends in the tropical troposphere

B. D. Santer,<sup>a\*</sup> P. W. Thorne,<sup>b</sup> L. Haimberger,<sup>c</sup> K. E. Taylor,<sup>a</sup> T. M. L. Wigley,<sup>d</sup>  
J. R. Lanzante,<sup>e</sup> S. Solomon,<sup>f</sup> M. Free,<sup>g</sup> P. J. Gleckler,<sup>a</sup> P. D. Jones,<sup>h</sup> T. R. Karl,<sup>i</sup> S. A. Klein,<sup>a</sup>  
C. Mears,<sup>j</sup> D. Nychka,<sup>d</sup> G. A. Schmidt,<sup>k</sup> S. C. Sherwood,<sup>l</sup> and F. J. Wentz<sup>j</sup>

list, please let me know, and I'll remove your name immediately.

With best regards,

Ben Santer

---

Benjamin D. Santer  
Program for Climate Model Diagnosis and Intercomparison  
Lawrence Livermore National Laboratory  
P.O. Box 808, Mail Stop L-103  
Livermore, CA 94550, U.S.A.  
Tel: (925) 422-3840  
FAX: (925) 422-7675  
email: [santer1@llnl.gov](mailto:santer1@llnl.gov)

---

**From:** [morano@climatedepot.com](mailto:morano@climatedepot.com) on behalf of [Marc Morano](#)  
**To:** [morano@climatedepot.com](mailto:morano@climatedepot.com)  
**Subject:** Alert: Penn State: "Further investigation is warranted" into Climategate Prof. Michael Mann -- Inquiry "moves to next phase"  
**Date:** Wednesday, February 03, 2010 12:13:21 PM

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For Latest Go To [www.ClimateDepot.com](http://www.ClimateDepot.com)

[Alert: Penn State Committee Report: 'Further investigation is warranted' into Climategate Prof. Michael Mann -- Inquiry 'moves to next phase'](#) -- 'The committee is charged with looking at the ethical behavior of the scientist and determining whether he violated professional standards in the course of his work'

[AP: Penn St. Moving Forward With Michael Mann Probe: 'An inquiry report said an allegation of inappropriate faculty conduct in scientific discourse warrants further investigation'](#)

[Read Penn State's full report: 'Inquiry Report: Concerning the Allegations of Research Misconduct Against Dr. Michael E. Mann'](#)

'Internal inquiry by Penn State into the research and scholarly activities of a well-known climate scientist [Mann] will move into the investigatory stage'

[Penn State Investigation in Mann: 'On November 29, 2009, Dr. Pell and Dr. Foley met with Dr. Mann to let him know personally that he was accused of research misconduct'](#) - Penn State Report: 'After careful consideration of all the evidence and relevant materials, the inquiry committee could not make a definitive finding whether there exists any evidence to substantiate that Dr. Mann did engage in, or participate in, directly or indirectly, any actions that deviated from accepted practices within the academic community'

Marc Morano  
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To unsubscribe, please send email to [Morano@ClimateDepot.com](mailto:Morano@ClimateDepot.com) with "unsubscribe"

in the subject line.

**From:** [Gerald North](#)  
**To:** [Andrew Dessler](#)  
**Subject:** another one  
**Date:** Saturday, January 23, 2010 4:55:24 PM

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Begin forwarded message:

**From:** "Mark T. La Vigne" <  
**Date:** December 1, 2009 1:21:21 PM CST  
**To:** [g-north@tamu.edu](mailto:g-north@tamu.edu)  
**Subject:** **Climategate scandal, and your comments**

Professor North,

I was not aware that it is ordinary practice among scientists to hide data, criminally ignore legal FOIA requests, laugh at the death of colleagues, and brazenly rig numbers to make the result(s) match their preconceived notions. Since, by your statements to [Andrew Freeman](#), we can gather that you believe these are normal, and well-established behaviors among scientists within your own experience, it prompts a question: Are these behaviors normal for you and those around you, as well?

If so, I should think I will be contacting the Attorney General of Texas, and the legislature, to start up an investigation as to the sort of academic fraud that must be rampant at Texas A&M, supposing that you view these behaviors among scientists as 'normal.'

You should be ashamed for your obvious attempt to excuse what can only be considered a global scam. I think we must now investigate your role in it, if any. I will be contacting the Attorney General's office, being a resident of the State of Texas, in order to find out if the people of Texas have been scammed and otherwise robbed by what you apparently consider the 'normal practice' among scientists.

Mark T. LaVigne  
Rogers, TX

**From:** [Gerald North](#)  
**To:** [Andrew Dessler](#)  
**Subject:** Message from Dr. Dunn  
**Date:** Saturday, January 23, 2010 4:50:00 PM

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Begin forwarded message:

**From:** "John Dunn" <  
**Date:** January 10, 2010 7:33:37 PM CST  
**To:** "Gerald North" <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
**Subject:** \*\*\* JUNK MAIL \*\*\***Fw: A simple question**

Jay Lehr was awarded a Ph.D from Princeton a long time ago, and continues to do very creditable work in environmental studies.

this response he sends, which he caught on the backside of the exchange with Seldon Graham, shows you to be a fool. A whore for the global warming crowd, looking for a comfortable place where you can claim your position as an established scientist.

au contraire, you are living a lie.  
John Dale Dunn MD JD  
Consultant-Emergency Services  
Peer Review/Mediation  
401 Rocky Hill Road  
Brownwood, Texas 76801  
325 784-6697  
cell 642-5073

----- Original Message -----

**From:** [Jay Lehr](#)  
**To:** ; [Banner, Jay L](#)  
**Cc:** [adessler@tamu.edu](mailto:adessler@tamu.edu) ; [Charles Jackson](#) ; [Gerald North](#) ; [Steve Goreham](#) ; [Gerald North](#) ; [John Dunn](#) ; [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu) ; [Zong Liang Yang](#) ; [Seldon Graham](#) ; [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu) ; [toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)  
**Sent:** Sunday, January 10, 2010 2:34 PM  
**Subject:** Re: A simple question

Since I am on the list of this interminable conversation about the absurd idea that man can conceivably impact in any significant way the temperature of this planet I am sending you all below a list of about 48 factoids on the subject which hopefully offers to anyone with an IQ above plant life enough reasons why global warming alarmism has nothing what ever to do with our climate but instead it is only about money, politics

and power.

Jay Lehr Ph.D.  
Science Director  
The Heartland Institute

SIGNIFICANT EVIDENCE THAT MANKIND HAS AN  
INSIGNIFICANT IMPACT  
ON THE CLIMATE OF PLANET EARTH  
BY Jay Lehr, Ph.D.  
Science Director of The Heartland Institute

#### SCIENTIFIC EVIDENCE

1- Carbon Dioxide is not a pollutant. On the contrary it makes crops and forests grow faster. Mapping by satellite shows that the earth has become about 6% greener overall in the past two decades, with forests expanding into arid regions. The Amazon rain forest was the biggest gainer, with two tons of additional biomass per acre per year. Certainly climate change does not help every region equally, but careful studies predict overall benefit, fewer storms, more rain, better crop yields, longer growing seasons, milder winters and decreasing heating costs in colder climates. The news is certainly not bad and on balance may be rather good.

2- Someday the world will wake up and laugh when they finally understand that the entire pursuit of economic ruin in the name of saving the planet from increasing carbon dioxide is in fact a terrible joke. You see it is an unarguable fact that the portion of the Earth's greenhouse gas envelope contributed by man is barely one tenth of one per cent of the total. Do the numbers your self. CO<sub>2</sub> is no more than 4%

of the total (with water vapor being over 90% followed by methane and sulphur and nitrous oxides). Of that 4% man contributes only a little over 3%. Elementary school arithmetic says that 3% of 4% is .12% and for that we are sentencing the planet to a wealth of damaging economic impacts.

3- The effect of additional CO<sub>2</sub> in the atmosphere is limited because it only absorbs certain wave lengths of radiant energy. As the radiation in the particular wave length band is used up, the amount left for absorption by more of the gas is reduced. A simple analogy is to consider drawing a curtain across a window - a large part of the light will be shut out but some will still get through. Add a second curtain to the first and most of the remaining light will be excluded. A point will quickly be reached where adding more curtains has a negligible effect, because there is no light left to stop. This is the case with the absorption of energy as more carbon dioxide is added to the atmosphere.

4- If greenhouse gases were responsible for increases in global temperature of recent decades then atmospheric physics shows that higher levels of our atmosphere would show greater warming than lower levels. This was not found to be true during the 1978 to 1998 period of .3 degrees centigrade warming.

5- 900,000 years of ice core temperature records and carbon dioxide content records show that CO<sub>2</sub> increases follow rather than lead increases in Earth temperature which is logical because the oceans are the primary source of CO<sub>2</sub> and they hold more CO<sub>2</sub> when cool than when warm, so warming causes the oceans to release more CO<sub>2</sub>.

6- While temperatures have fluctuated over the past 5000 years, today's earth temperature is below average for the past 5000 years.

7- A modest amount of global warming, should it occur would be beneficial to the natural world. The warmest period in recorded history was the Medieval Warm Period roughly 800 to 1200 AD when temperatures were 7 to 9 degrees Fahrenheit warmer than today allowing great prosperity for mankind, and Greenland was actually green.

8- Temperature fluctuations during the current 300 year recovery from the Little Ice Age which ended around 1700AD, following the Medieval Warming Period , correlate almost perfectly with fluctuations in solar activity. This correlation long predates human use of significant amounts of fossil fuels such as coal, oil and natural gas.

9- The National Aeronautic and Space Agency (NASA) has determined that during the time the Earth was warming so was Mars, Pluto, Jupiter and the largest moon of Neptune.

10- We know that 200 million years ago when the dinosaurs walked the Earth, average Carbon Dioxide concentration in the atmosphere was 1800 ppm, five times higher than today.

11- All four major global temperature tracking outlets (Hadley UK, NASA's Goddard Institute for Space Studies, University of Alabama Huntsville, and Remote Sensing Systems Santa Rosa) have released updated information showing that in 2007, global cooling ranged from 0.65C to .75C. a value large enough to erase nearly all the global warming recorded over the past 100 years. All in one years time.

12- NASA satellites measuring Earth atmosphere

temperature found 2008 to be the coldest year since 2000 and the 14th coldest of the past 30 years. US climate Monitoring Stations on the surface show greater warmth, but pictures of most of the 1,221 US temperature stations show 90% to be located near human sources of heat (exhaust fans, air conditioning units, hot roof tops, asphalt parking lots and so forth). the conclusion is inescapable: The US land based temperature record is unreliable.

13- While we hear much about one or another melting glaciers, a recent study of 246 glaciers around the world between 1946 and 1995 indicated a balance between those that are losing ice, gaining ice and remaining in equilibrium. There is no global trend in any direction.

14- On May 1, 2007 National Geographic magazine reported that the snows on Mt. Kilimanjaro were shrinking as a result of lower precipitation rather than a warming trend.

15- Never mind that the overall polar bear population has increased from about 5000 in the 1960s to 25,000 today, and that the only two populations in decline come from areas where it has actually been getting colder over the past 50 years. Also ignore the fact that polar bears were around 100,000 years ago, long before at least one important interglacial period when it was much warmer than the present. Clearly they survived long periods of time when the climate of the Arctic was much warmer than today. Yet they are not expected to survive this present warming without help from government regulators.

16- No computer model ever used to compute climate change has been able to calculate our recent past earth temperature though all measured

data inputs were known and available.

17- The inability of current computer hardware to cope with a realistic climate model projection was put in perspective by Dr. Willie Soon of the Harvard Smithsonian Institute who calculated that to run a 40 year projection using all variables across all spatial scales would require 10 to the power 34 years of supercomputer time. This is 10 to the power 24 times longer than the age of the Universe.

## ECONOMICS

1- The Nature conservancy predicts that by 2030 "eco-friendly" wind solar and biofuel projects will require extra land equivalent to Minnesota, to produce the energy we now get from oil, gas and coal. Interior Secretary Salazar's proposal to have offshore wind turbines replace gas, coal and nuclear electricity generators would mean 336,000, 3.25 MegaWatt behemoths off our coasts - if they operate 24/7/365. Far more if they don't. Where exactly will we site those turbines - and get billions of tons of concrete, steel, copper and fiberglass it will take to build and install the expensive, unreliable, subsidized monsters?

2- The idea that you can run America on "solar, wind and biodiesel" is laughable. Since 70% of the electricity generated in the US involves the burning of coal, natural gas or oil and another 20% from nuclear, a real viable alternative energy is decades away. A single 555 Mega-Watt gas fired power plant in California generates more electricity per year than do all 13,000 of the state's wind turbines. The gas-fired plant occupies just 15 acres. The 300 foot tall wind turbines impact 106,000 acres, destroy scenic vistas and kill tens of thousands of birds and

bats every year - to provide expensive, tax-subsidized, intermittent, insufficient electricity.

3- The federal government has been investing in renewable power research and technology for decades, with virtually nothing to show for it. Billions of federal dollars are diverted to the renewable power industry every year, yet the industry still cannot come close to producing power anywhere near as economically as conventional fuel sources such as coal and gasoline.

4- The automotive, coal and oil industries will be hit the hardest by expensive new penalties and mandates regarding carbon dioxide production, increasing the cost of transportation and electrical power to the consumer.

5- A typical 1000 Mega Watt power station could burn about 3 million tons of coal per year requiring 300 trains per year to supply the coal. If Carbon, Capture and Burial is required, the extra power needed will call for another 150 trains of coal. And if trains were used to haul the captured CO<sub>2</sub>, the mass of material moved would require another 1150 trains per year, each train carrying 10,000 tons.

6- According to the United States Energy Information Administration economic models, last year's proposed Lieberman-Warner bill to reduce CO<sub>2</sub> emissions, if passed, would have cost the average US household between \$4000 and \$7000 per year, would have increased unemployment by at least 2.5 percent, and would have reduced our Gross Domestic Product by 2.6 percent each and every year.

7- One side effect of Obama's cap-and-trade plan is the elimination of about 83,000 mining related jobs, 60,000 coal-energy power plant jobs, 31,000 coal

transportation jobs and the tens of thousands of indirect jobs that produce products used by the coal sector.

8- California and Spain have proved that the war on carbon dioxide will kill real jobs faster than fake green jobs can be created. At the time, the silly claims that alternate energy can provide continuous, economical and reliable power will encourage neglect of US key reliable low cost electricity source-coal power. When the lights go out industry migrates to Asia and our power bills will soar and it will be too late to prevent great harm to our national economy, our jobs and our lifestyle.

9- The potential federal revenue stream from cap and trade boggles the mind. White House sources estimate at least \$72 billion per year in new funding for government coffers. They concede it could be much more, depending on auction prices. Who will foot the bill? Energy consumers of course, but those living in coal dependent regions will pay the most.

10- In the 15 mid-west states stretching from the Appalachians to the Rockies residential power bills will increase between \$20 and \$26 per month if the CO2 permit auction price is as low as \$20 per metric ton, but the price will likely be higher. Ohio will be hit the 6th hardest as a result of its energy sources.

## POLITICAL POSITIONS

1- Historically Michael Crichton said the claim of consensus in science has been the first refuge of scoundrels. it has been a way to avoid debate by claiming a matter to be settled. Whenever you hear that a consensus of scientists agree on something or other reach for your wallet because you are

being scammed.

2- Since credible scientific evidence established that CO<sub>2</sub> from mankind has little impact on temperature and none on public health, the net result of CO<sub>2</sub> limitations will be a transfer of wealth and the ceding of more authority to the United Nations as a global government.

3- Once we accept the principle that carbon should be monitored, controlled and taxed, we open the door to the most invasive kind of bureaucratic meddling, and to all the carbon cops who want to stick their noses into every aspect of the way we live, whether it is the kind of car we drive, our holiday destination, our pleasure boat or even the food miles accrued in our choice of food.

4- Computer models of climate are now predicting that there will be no change in global temperature over the next ten years. In some cases, these predictions say no significant warming until 2030. Take your pick. If these models are so great, how did they miss the time-out we are experiencing from global warming?

5- Surely you have heard that nine of the ten warmest years recorded in the US lower 48 states since 1880 have occurred since 1995, with the hottest being 1998. Well, that also has been shown to be wrong. Less than a decade ago, the US government changed the way it recorded temperatures. No one thought to correlate the new temperatures with the old ones, until Canadian researcher Steve McIntyre did so correcting the record to show that 1934 was in fact the hottest year, with 1998 second and 1921 third. Four of the 10 hottest years were in the 1930s and only 3 in the past decade. Eight of the 15 hottest years in

the past century occurred before carbon dioxide began its recent rise.

6- The world's largest coal supplies are situated in the US China and Russia which are all increasing their production. Electricity generated from coal in 2008 was a record with China increasing production by 200 million tons. Unilateral efforts to cut CO2 emissions in the face of this fact are therefore useless.

7- Representative Waxman and Markey's 648 page discussion draft of the climate bill with its descriptions of permitted light bulbs is so complex, confusing and impossible to understand, let alone implement without breaking some regulation, that it will make the old central planning of the soviet union seem like a back of the envelope outline by comparison.

8- The Precautionary Principle often claimed as reason to curtail CO2 emissions cuts both ways. If we make it harder or more expensive for people in Africa to use their coal it means they keep inhaling smoke from wood fires, babies get lung disease; forests are raised for fuel. Meanwhile electric trucks cost more to run and that makes fresh food more expensive, refrigerated meat is not available and malnutrition increases and money for medical research shrinks.

## PHILOSOPHICAL CONSIDERATIONS

1- There is no consensus of scientists in favor of human caused global warming. While opinion polls do not determine truth in science, more than 31,000 American Scientists signed a petition drafted by the Oregon Institute of Science and Medicine which

stated: There is no convincing scientific evidence that human release of carbon dioxide, methane or other green house gases is causing or will in the foreseeable future cause catastrophic heating of the Earth Atmosphere and disruption of the Earth's climate.

2- While global warming is not currently happening perhaps we should wish it were. Far more premature deaths result from cold than from heat, longer growing seasons yield larger crops, respiratory and cardiovascular diseases increase in cold weather, increased precipitation in warm weather adds to water supply in water scarce areas. US heating bills will decline substantially.

3- Paradoxically, the world environment is likely to be damaged far more by misguided attempts to reduce carbon emissions than would be caused by man-made global warming even if it were real and continued unchecked. If third world countries were prevented from exploiting their natural resources to provide a better standard of living for their citizens, not only would their peoples continue to suffer poverty, disease, and low life expectancy, but they would not have the ability to protect their natural environments - only wealthy countries can afford to do so.

4- Nobody believes a weather prediction 7 days ahead but now we are asked to reorder our economy based on climate predictions 100 years hence which are no longer supported by current evidence.

5- Carbon offsetting and trading schemes have the potential to make large profits for those who run them. You can not actually offset carbon emissions by planting trees as they merely store some of it for

a while before releasing it once they rot or burn, and the storage will not even offset the emission for many, many years after planting. Plus, the earth would have to be covered entirely by trees to even theoretically counter the impact of man-made emissions.

6- Subsidies given to develop renewable energy sources such as wind power are a license to print money for their operators at the expense of the rest of us. Companies promote green products that may be little more than gimmicks, but can be very profitable.

7- Although the court of public opinion already weigh climate change as a very low economic priority, the media continues to uncritically accept and vigorously promote shrill global warming alarmism.

8- The United States government budgets \$6 billion a year for climate research supporting a growing industry of scientists and university labs that specialize in the subject. it all adds up to a significant institutionalization of the impulse to treat carbon as a problem.

9- More than six decades of painstaking conservation efforts that have brought the majestic whooping crane back from the brink of extinction may come undone because of the proliferation of wind farms in the United States.

10- Although the Alaska Department of Fish and Game reports the global polar bear population is now between 20 and 25 thousand up from 8 to 10 thousand in 1960, the polar bear has been listed as a species threatened by global warming.

11- Climate change is not a scientific problem that found political support; this is about eco-activists

and politicians who found a scientific issue they feel can leverage them into power and control. The environment is a great way to advance a political agenda that favors central planning and an intrusive government. What better way to control someone's property than to subordinate one's private property rights to environmental concerns.

## CONCLUSIONS

1- While the most extreme environmental zealots may be relatively few in number, they have managed to gain undue influence by exploiting the gullibility of many ordinary and scientifically illiterate people, who are only too willing to believe that the planet needs saving from man's excesses. Perhaps it is a psychological throwback to those earlier civilizations that offered human sacrifices to the gods, to assuage their sins and spare them from punishment in the form of drought, flood, famine or disease. There are certainly many parallels between modern environmentalism and religion.

2- By focusing our priorities on future generations we focus less on improving the lives of people who are alive today. These future generations bear no closer relationship to us than those now living in developing countries whose lives we disdain to save. Why are we not feeding people in the world who are hungry? Why are we not giving clean water to the almost one billion people who don't have clean water? The greatest source of environmental degradation is poverty. Why aren't we helping eliminate poverty? One answer is that perhaps it is a lot easier worrying about future generations than trying to fix present day problems.

3- Global warming is a major industry today. Between 1992 and 2008 the US Government spent

\$30 billion on climate change research and now contributes \$6 billion a year. This finances jobs, grants, conferences, international travel and academic journals. It not only keeps a huge army of people in comfortable employment, but also fills them with self righteousness and moral superiority regardless of the fact that real science did not support it.

It is clear that with the deep roots of the global warming scare it is not about to go away. It has the added advantage of not being able to be proven false in our life time. In the mean time the sanest course for us would be to gain what limited perspective we can (remembering the global cooling alarm of a generation ago) and proceed cautiously. We are going through a scare with many causes, and we need to step back from it, take a long second look at the scientific evidence, and not do anything rash.

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**From:** "  
**To:** "Banner, Jay L" <[banner@jsg.utexas.edu](mailto:banner@jsg.utexas.edu)>  
**Cc:** "[adessler@tam.u.edu](mailto:adessler@tam.u.edu)" <[adessler@tam.u.edu](mailto:adessler@tam.u.edu)>; Charles Jackson <[charles@ig.utexas.edu](mailto:charles@ig.utexas.edu)>; Gerald North <[g-north@tam.u.edu](mailto:g-north@tam.u.edu)>; Steve Goreham <[Steve.Goreham@tam.u.edu](mailto:Steve.Goreham@tam.u.edu)>; Gerald North  
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"toby.baker@governor.state.tx.us" <[toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)>  
**Sent:** Sun, January 10, 2010 12:27:08 PM  
**Subject:** RE: A simple question

Thanks Dr. Banner (Jay). I appreciate feedback from a dedicated earth scientist such as yourself.

Although it puts me on a limb with a lot of people, the anthropogenic warming issue is too critical for our future to stay quiet about. I feel I am sort of an "add-on" to the Texas conversation going on, but very supportive of an effort to get the rush to CO2 control halted, as I am a confirmed skeptic of the hypothesis of climate disaster. Not sure if you read this piece I did last month: [http://www.americanthinker.com/2009/12/clearing\\_the\\_air\\_on\\_the\\_clean.html](http://www.americanthinker.com/2009/12/clearing_the_air_on_the_clean.html)

I will always welcome any pointed serious critique, but remain unconvinced the AGW alarmists are correct to be alarmed.

( I tried to find the Austin Statesman letter you mention via the Web, but could not. Please send a link or copy if you have one.)

Best of everything.

Harvey

From:  
Harvey M. Sheldon  
Personally  
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"Banner, Jay L" <[banner@jsg.utexas.edu](mailto:banner@jsg.utexas.edu)>

01/08/2010 05:51 PM

To  
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cc "[adessler@tamu.edu](mailto:adessler@tamu.edu)" <[adessler@tamu.edu](mailto:adessler@tamu.edu)>, Charles Jackson  
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<[toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)>

Subject RE: A simple question

Mr. Sheldon,

I agree with you that Texas should have its own panel of experts to consider what the best info is on climate change and its potential impact on our state.

You may also be interested in a letter to the editor in today's Austin American Statesman entitled "Carbon dioxide primer" that addresses the question of why there is a focus on fossil fuel sources of atmospheric CO2.

Jay

**From:**  
**Sent:** Thursday, January 07, 2010 4:12 PM  
**To:** Gerald North

**Cc:** [adessler@tamu.edu](mailto:adessler@tamu.edu); Jay Banner; Charles Jackson; Steve Goreham; Gerald North; Jay Lehr; John Dunn; [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu); Zong Liang Yang; Seldon Graham; [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu); [toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)

**Subject:** Re: A simple question

Sorry Dr. North, I presumed incorrectly you were into the physics of the questions. I appreciate your response. As to RealClimate and Dr. Beck, I only know that RealClimate is basically a site that has been supported and voiced the opinions of several of the very people who are implicated by the "Climategate" e-mails in causing inappropriate data manipulation, erasures or data and other seriously questionable attempts to influence what gets published. A friend of mine who is a physicist repeatedly cited that site, too. He and that site are thumping the IPCC book as gospel, when it is in my mind clearly not. RealClimate has gained what I think is unfounded trust among many scientists, but its faults are also now being noticed.

I will leave it to other scientists than Beck (who I am sure has critics, as do we all) to speak further, and otherwise wish you and all concerned the best. Although many have been in the best of faith, this issue has been overhyped, oversold, hijacked, and distorted for political ends; it needs a thorough investigation by a truly trustworthy panel of investigators. No state, especially Texas, should let the federal government get away with putting this chokehold on the American economy.

From:  
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**Gerald North** <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
Sent by: Gerald North

01/07/2010 03:35 PM

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Subject Re: A simple question

Sorry, Mr. Sheldon,

I am not a biologist and I can only give answers for the elementary questions as one I provided to Mr. Graham. I wish I knew enough to go over the Key Finding you list. I do understand several of them and I cannot disagree with the ones I understand. In my opinion many of these are good. Again it is a question of who will be the winners and who will be the losers. Picking is not science.

Then you went to Beck. Since I never heard of him (hardly an insult), I plugged Beck and CO<sub>2</sub> into google and found myself at a 2007 post on RealClimate, a blog that I read only when someone sends me there (thanks, I guess).

<http://www.realclimate.org/index.php/archives/2007/05/beck-to-the-future/>

This looks like a pretty good explanation of Beck's work.

By the way, one of the world experts is in the Windy City at the U of C, David Archer. You might check his website for some of those 1000 year adjustment times. He is a formidable scientist.

Jerry

On Jan 7, 2010, at 1:55 PM,

wrote:

Dr. North, I have been trying to keep to a quiet back seat on this whole "simple question" business. So forgive me if my self-control has temporarily failed, and please allow me to throw another snowball from right field. (It's snowing darned hard in Chicago today).

First, I suppose (or at least have no immediate basis to disagree that) it is perfectly correct to say that carbon dioxide released by fossil fuel combustion is from deposits that would otherwise lay sequestered in the earth. First question, is that so bad? Before you respond, please consider the following observations of the Non-Governmental International Panel on Climate Change:

#### **Chapter 7 Key Findings**

- A 300-ppm increase in the air's CO<sub>2</sub> content typically raises the productivity of most herbaceous plants by about one-third; and this positive response occurs in plants that utilize all three of the major biochemical pathways (C<sub>3</sub>, C<sub>4</sub>, CAM) of photosynthesis. For woody plants, the response is even greater. The productivity benefits of CO<sub>2</sub> enrichment are also experienced by aquatic plants, including freshwater algae and macrophytes, and marine microalgae and macroalgae.
- The amount of carbon plants gain per unit of water lost-or water-use efficiency-typically rises as the CO<sub>2</sub> content of the air rises, greatly increasing their ability to withstand drought. In addition, the CO<sub>2</sub>-induced percentage increase in plant biomass production is often greater under water-stressed conditions than it is when plants are well watered.
- Atmospheric CO<sub>2</sub> enrichment helps ameliorate the detrimental effects of several environmental stresses on plant growth and development, including high soil salinity, high air temperature, low light intensity and low levels of soil fertility. Elevated levels of CO<sub>2</sub> have additionally been demonstrated to reduce the severity of low temperature stress, oxidative stress, and the stress of herbivory. In fact, the percentage growth enhancement produced by an increase in the air's CO<sub>2</sub>

concentration is often even greater under stressful and resource-limited conditions than it is when growing conditions are ideal.

- As the air's CO<sub>2</sub> content continues to rise, plants will likely exhibit enhanced rates of photosynthesis and biomass production that will not be diminished by any global warming that might occur concurrently. In fact, if the ambient air temperature rises, the growth-promoting effects of atmospheric CO<sub>2</sub> enrichment will likely also rise, becoming more and more robust.
- The ongoing rise in the air's CO<sub>2</sub> content likely will not favor the growth of weedy species over that of crops and native plants.
- The growth of plants is generally not only enhanced by CO<sub>2</sub>-induced increases in net photosynthesis during the light period of the day, it is also enhanced by CO<sub>2</sub>-induced decreases in respiration during the dark period.
- The ongoing rise in the air's CO<sub>2</sub> content, as well as any degree of warming that might possibly accompany it, will not materially alter the rate of decomposition of the world's soil organic matter and will probably enhance biological carbon sequestration. Continued increases in the air's CO<sub>2</sub> concentration and temperature will not result in massive losses of carbon from earth's peatlands. To the contrary, these environmental changes-if they persist-would likely work together to enhance carbon capture.
- Other biological effects of CO<sub>2</sub> enhancement include enhanced plant nitrogen-use efficiency, longer residence time of carbon in the soil, and increased populations of earthworms and soil nematodes.
- The aerial fertilization effect of the ongoing rise in the air's CO<sub>2</sub> concentration (which greatly enhances vegetative productivity) and its anti-transpiration effect (which enhances plant water-use efficiency and enables plants to grow in areas that were once too dry for them) are stimulating plant growth across the globe in places that previously were too dry or otherwise unfavorable for plant growth, leading to a significant greening of the Earth.
- Elevated CO<sub>2</sub> reduces, and nearly always overrides, the negative effects of ozone pollution on plant photosynthesis, growth and yield. It also reduces atmospheric concentrations of isoprene, a highly reactive non-methane hydrocarbon that is emitted in copious quantities by vegetation and is responsible for the production of vast amounts of tropospheric ozone.

Second question: As I understand the IPCC (UN Panel) argument (and it is an argument or hypothesis), the lifetime of this carbon in the atmosphere is many decades at least. Some people have published arguments that it is a thousand years or more. Now, one can readily see that there might be a cumulative effect of some considerable duration were this true, if fossil fuel use persists or increases (without CO<sub>2</sub> control), and if nothing happens to absorb or otherwise send CO<sub>2</sub> elsewhere than the atmosphere. However, a host of prior literature puts CO<sub>2</sub> life at between 5 and 15 years. What gives?

Similarly, how do you explain Dr. Ernst Beck's graph, which shows a variability in CO<sub>2</sub> since 1826, including a downturn in the mid-20th century? Surely something is grabbing or venting CO<sub>2</sub>, and it does not just "pile up". Another way to ask this is what is the basis for your assertion that there is a limit to CO<sub>2</sub> absorption and it has been reached? Another subset question is: would not heartier plants absorb ever more CO<sub>2</sub>?

This is from [www.icecap.us](http://www.icecap.us), by import from: <http://www.biomind.de/realCO2/>

"

I am sorry I do not have a whole lot of time to further question, and I know we may get into a discussion of isotopes and such if I did. I would only note to you that Seldon Graham's "simple question" makes a lot more common sense if one takes account of the data and evidence that the atmosphere is capable of throwing off a lot more heat than the IPCC calculations assume, and that the CO<sub>2</sub> issue is not as simple as you portray it by your implicit suggestion (I surmise) that "every CO<sub>2</sub> molecule not already in some existing state of nature other than the fossil fuel deposits is abnormal and a big problem." If that were so, why aren't the IPCC predictions holding true re rate of CO<sub>2</sub> rise, temperature rise, etc. A goodly number of other scientists than Beck, including Drs Gray (more than one of those) and Lindzen and others have documented how darned normal the current carbon dioxide situation is, and how much more of it is coming from oceans and other natural reservoirs than the IPCC asserts.

For all I know, you may agree with me that it is unwise to place the control of fuel combustion in the hands of central planners in Washington. I am certain it will ruin America's vitality and free enterprise culture, and that it is being done based on way way overstated alarmism. I greatly respect the calling of science; i just wish that the development of data and hypotheses that have been involved in the climate issue were trustworthy. Too many signs and examples of "our way or the highway" thinking and actions by people with agendas have come to light to allow this issue to go unexamined by people concerned about this country's future.

Gotta go. Just couldn't let an ornery old Army officer like Seldon Graham have to stand alone.

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This website documents my latest research on the history of carbon dioxide gas analysis. My work had been published by several journals and had been presented at national and international meetings. In literature we can find more than 200 000 directly measured CO2 data since 1800 from which I have estimated the annual CO2 background averages since 1826 to 1960, the end of the measurements by chemical methods. IPCC prefers ice core reconstructions. This new data set reveals remarkable coherence with other geophysical timeseries. Please feel free to check data, methods, stations and historical literature. Comments are welcome.

<mime-attachment.jpeg>

**Fig. 1** Atmospheric CO2 background level 1826 – 1960. CO2 MBL estimation 1826-1960 from directly measured data (Beck 2009); black line smoothed by a Savitzky-Golay filter, grey area= estimated error range).Savitzky Golay smoothing parameters : width of the moving window: 5, order: 2; passes: 3.  
(> 400 papers, >200 000 raw samples, > 100 000 selected for MBL estimation)"

explanation of isotopes and such

Mr. Graham,

Let's go over this one point again. While I do not favor ethanol solutions to our problem, let me explain why that pound of CO<sub>2</sub> from ethanol burning is not adding to the atmosphere. The point is that in producing the ethanol a pound of so of CO<sub>2</sub> is extracted from the atmospheric reservoir. Whereas when you produce a pound of CO<sub>2</sub> from coal it comes from the atmosphere as it was a hundred or more millions of years ago. This stuff has been buried all that time and out of reach. So the ethanol thing just removes a little and returns it to the atmosphere. It does not cause the concentration of CO<sub>2</sub> to go up.

Andy is still waiting for your call. He promises to be nice.

Jerry

On Jan 7, 2010, at 12:21 PM, Seldon Graham wrote:

Dr. North:

Thank you for responding and giving me your best shot, even though it certainly does not come close to answering my simple question in the Austin American-Statesman, 12-23-09.

With all due respect, you are making political arguments instead of following the scientific method of proof. There is a total absence of reproducible test results of an hypothesis. The "moral choice" argument is the last refuge of losing debaters.

Assume, for the sake of your political arguments, that the current Democratic Party / Obama energy agenda has already succeeded — thereby destroying the oil industry in Texas and the rest of the United States, which includes the Texas A&M Petroleum Engineering Department — by replacing all liquid vehicle fuel in the United States with ethanol, there would be about a pound **more** of carbon dioxide emitted into the atmosphere for every gallon of gasoline that the ethanol replaces. [The Wall Street Journal, 10-8-09, p. A16, "New CO<sub>2</sub> Rules Will Have Many Strange Consequences."] Thus, the current Democratic Party / Obama energy agenda will cause **more**, not less, carbon dioxide emissions into the atmosphere.

Does it not seem strange to you that so-called "climate scientists" who allegedly want to decrease carbon dioxide emissions into the atmosphere are, in fact, advocating an agenda which **increases** carbon dioxide emissions into the atmosphere? It seems quite insane to me, but that's just my opinion. Because this expensive insanity is paid for by taxpayers, it also seems quite un-American to me, but, again, that's just my opinion.

Obviously, your particular "climate science community" — which does not include Lindzen, Singer, Michaels, Christy or any of the 9,000 Ph.D.s signing the Oregon Institute of Science and Medicine petition project — cannot answer my simple question.

Again, thank you for responding, which is something that Secretary Steven Chu and Science Czar John Holdren did not do.

Seldon B. Graham, Jr.

On Jan 6, 2010, at 11:42 AM, Gerald North wrote:

Hi Mr. Graham,

One last time. From your letter to the editor.

The question for scientists is whether CO<sub>2</sub> increases cause a global warming and if so how much. The climate science community has settled on the answer that it does cause warming and by a range of from about 1.5 C to 4.5 C for CO<sub>2</sub> doubling. Is this bad? Well it is if the top of the range is true, not so bad if the bottom holds. If the average over the range happens, there will be winners and losers. Anyone deciding on how to handle this will be making choices that affect people differently. These last are not scientific questions. They are moral choices. My opinion on the subject is no better than anyone else's since how do we really decide on one person's loss over another's gain?

But if you want my opinion it is that the likelihood of serious negative consequences for most humans is large enough that perhaps we should take some precautionary measures seriously. For example, conservation, cutting on imported energy sources that could compromise our national security to name a few. Since at least some of these measures are likely to be adopted, why not get the jump on our foreign competitors and move on some of the technologies that have been discussed. Texas is likely to be a big winner if we do, since we are loaded with opportunities here (wind, sun, etc).

In another decade of research we will have squared away a lot of our uncertainties about forced climate change. As this approaches we can be thinking about what to do if the warming does indeed appear to be caused by humans and to what extent things are changing as result.

I hope this answers your question. If you have further questions I suggest that you phone Professor Andrew Dessler. He has volunteered to continue the conversation via phone: (979) 862-1427.

Jerry North

On Jan 6, 2010, at 9:58 AM, Seldon Graham wrote:

Dr. North:

Thank you for your response.

Yes, I am really seeking a scientific answer to my question. No, the answer is not perfectly obvious to me or, for that matter, to the public. What is that perfectly obvious answer?

Seldon B. Graham, Jr.

On Jan 5, 2010, at 1:02 PM, Gerald North wrote:

Dear Mr. Graham,

Thanks for your hard copy letter, but as I said in my email to Charles, I am not really sure you are seeking an answer, especially since it is perfectly obvious.

Sincerely,  
Jerry

On Jan 5, 2010, at 11:29 AM, Seldon Graham wrote:

A simple scientific answer will perfectly satisfy "this guy." But, no scientist has yet been able to answer my question.

No *ad hominem* attacks have been made by me. I have just asked a simple question which no scientist seems able to answer.

Seldon B. Graham, Jr.  
"This guy"

On Jan 2, 2010, at 12:16 PM, Gerald North wrote:

Hi Charles,

You will never satisfy this guy. He will tie you in knots and never change. I received many hostile emails (one saying he would contact the Texas Attorney General to have me fired) after my interview in Andrew Freedman's blog at the Washington Post. I simply ignore them.

Best,  
Jerry

Gerald North <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
Sent by: Gerald North  
<

01/07/2010 12:55 PM

To Seldon Graham <

cc Charles Jackson <[charles@ig.utexas.edu](mailto:charles@ig.utexas.edu)>, Jay Banner <[banner@mail.utexas.edu](mailto:banner@mail.utexas.edu)>, Zong Liang Yang <[liang@mail.utexas.edu](mailto:liang@mail.utexas.edu)>, katharine.hayhoe@ttu.edu, Jay Lehr < Steve Goreham < John Dunn < Harvey Sheldon < [adessler@tamu.edu](mailto:adessler@tamu.edu), [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu), [toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)

Subject Re: A simple question

has elected to be governed by the Illinois Uniform Partnership Act (1997).

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**From:** [Jay Lehr](#)  
**To:** [Banner, Jay L](#)  
**Cc:** [adessler@tamu.edu](mailto:adessler@tamu.edu); [Charles Jackson](#); [Gerald North](#); [Steve Goreham](#); [Gerald North](#); [John Dunn](#); [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu); [Zong Liang Yang](#); [Seldon Graham](#); [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu); [toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)  
**Subject:** Re: A simple question  
**Date:** Sunday, January 10, 2010 2:34:25 PM

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Since I am on the list of this interminable conversation about the absurd idea that man can conceivably impact in any significant way the temperature of this planet I am sending you all below a list of about 48 factoids on the subject which hopefully offers to anyone with an IQ above plant life enough reasons why global warming alarmism has nothing what ever to do with our climate but instead it is only about money, politics and power.

Jay Lehr Ph.D.  
Science Director  
The Heartland Institute

SIGNIFICANT EVIDENCE THAT MANKIND HAS AN  
INSIGNIFICANT IMPACT  
ON THE CLIMATE OF PLANET EARTH  
BY Jay Lehr, Ph.D.  
Science Director of The Heartland Institute

### SCIENTIFIC EVIDENCE

1- Carbon Dioxide is not a pollutant. On the contrary it makes crops and forests grow faster. Mapping by satellite shows that the earth has become about 6% greener overall in the past two decades, with forests expanding into arid regions. The Amazon rain forest was the biggest gainer, with two tons of additional biomass per acre per year. Certainly climate change does not help every region equally, but careful studies predict overall benefit, fewer storms, more rain, better

crop yields, longer growing seasons, milder winters and decreasing heating costs in colder climates. The news is certainly not bad and on balance may be rather good.

2- Someday the world will wake up and laugh when they finally understand that the entire pursuit of economic ruin in the name of saving the planet from increasing carbon dioxide is in fact a terrible joke. You see it is an unarguable fact that the portion of the Earth's greenhouse gas envelope contributed by man is barely one tenth of one per cent of the total. Do the numbers your self. CO<sub>2</sub> is no more than 4% of the total (with water vapor being over 90% followed by methane and sulphur and nitrous oxides). Of that 4% man contributes only a little over 3%. Elementary school arithmetic says that 3% of 4% is .12% and for that we are sentencing the planet to a wealth of damaging economic impacts.

3- The effect of additional CO<sub>2</sub> in the atmosphere is limited because it only absorbs certain wave lengths of radiant energy. As the radiation in the particular wave length band is used up, the amount left for absorption by more of the gas is reduced. A simple analogy is to consider drawing a curtain across a window - a large part of the light will be shut out but some will still get through. Add a second curtain to the first and most of the remaining light will be excluded. A point will quickly be reached where adding more curtains has a negligible effect, because there is no light left to stop. This is the case with the absorption of energy as more carbon dioxide is added to the atmosphere.

4- If greenhouse gases were responsible for increases in global temperature of recent decades then atmospheric physics shows that higher levels of our atmosphere

would show greater warming than lower levels. This was not found to be true during the 1978 to 1998 period of .3 degrees centigrade warming.

5- 900,000 years of ice core temperature records and carbon dioxide content records show that CO<sub>2</sub> increases follow rather than lead increases in Earth temperature which is logical because the oceans are the primary source of CO<sub>2</sub> and they hold more CO<sub>2</sub> when cool than when warm, so warming causes the oceans to release more CO<sub>2</sub>.

6- While temperatures have fluctuated over the past 5000 years, today's earth temperature is below average for the past 5000 years.

7- A modest amount of global warming, should it occur would be beneficial to the natural world. The warmest period in recorded history was the Medieval Warm Period roughly 800 to 1200 AD when temperatures were 7 to 9 degrees Fahrenheit warmer than today allowing great prosperity for mankind, and Greenland was actually green.

8- Temperature fluctuations during the current 300 year recovery from the Little Ice Age which ended around 1700AD, following the Medieval Warming Period , correlate almost perfectly with fluctuations in solar activity. This correlation long predates human use of significant amounts of fossil fuels such as coal, oil and natural gas.

9- The National Aeronautic and Space Agency (NASA) has determined that during the time the Earth was warming so was Mars, Pluto, Jupiter and the largest moon of Neptune.

10- We know that 200 million years ago when the dinosaurs walked the Earth, average Carbon Dioxide

concentration in the atmosphere was 1800 ppm, five times higher than today.

11- All four major global temperature tracking outlets (Hadley UK, NASA's Goddard Institute for Space Studies, University of Alabama Huntsville, and Remote Sensing Systems Santa Rosa) have released updated information showing that in 2007, global cooling ranged from 0.65C to .75C. a value large enough to erase nearly all the global warming recorded over the past 100 years. All in one years time.

12- NASA satellites measuring Earth atmosphere temperature found 2008 to be the coldest year since 2000 and the 14th coldest of the past 30 years. US climate Monitoring Stations on the surface show greater warmth, but pictures of most of the 1,221 US temperature stations show 90% to be located near human sources of heat (exhaust fans, air conditioning units, hot roof tops, asphalt parking lots and so forth). the conclusion is inescapable: The US land based temperature record is unreliable.

13- While we hear much about one or another melting glaciers, a recent study of 246 glaciers around the world between 1946 and 1995 indicated a balance between those that are losing ice, gaining ice and remaining in equilibrium. There is no global trend in any direction.

14- On May 1, 2007 National Geographic magazine reported that the snows on Mt. Kilimanjaro were shrinking as a result of lower precipitation rather than a warming trend.

15- Never mind that the overall polar bear population has increased from about 5000 in the 1960s to 25,000 today, and that the only two populations in decline come from areas where it has actually been getting

colder over the past 50 years. Also ignore the fact that polar bears were around 100,000 years ago, long before at least one important interglacial period when it was much warmer than the present. Clearly they survived long periods of time when the climate of the Arctic was much warmer than today. Yet they are not expected to survive this present warming without help from government regulators.

16- No computer model ever used to compute climate change has been able to calculate our recent past earth temperature though all measured data inputs were known and available.

17- The inability of current computer hardware to cope with a realistic climate model projection was put in perspective by Dr. Willie Soon of the Harvard Smithsonian Institute who calculated that to run a 40 year projection using all variables across all spatial scales would require 10 to the power 34 years of supercomputer time. This is 10 to the power 24 times longer than the age of the Universe.

## ECONOMICS

1- The Nature conservancy predicts that by 2030 "eco-friendly" wind solar and biofuel projects will require extra land equivalent to Minnesota, to produce the energy we now get from oil, gas and coal. Interior Secretary Salazar's proposal to have offshore wind turbines replace gas, coal and nuclear electricity generators would mean 336,000, 3.25 MegaWatt behemoths off our coasts - if they operate 24/7/365. Far more if they don't. Where exactly will we site those turbines - and get billions of tons of concrete, steel, copper and fiberglass it will take to build and install the

expensive, unreliable, subsidized monsters?

2- The idea that you can run America on "solar, wind and biodiesel" is laughable. Since 70% of the electricity generated in the US involves the burning of coal, natural gas or oil and another 20% from nuclear, a real viable alternative energy is decades away. A single 555 Mega-Watt gas fired power plant in California generates more electricity per year than do all 13,000 of the state's wind turbines. The gas-fired plant occupies just 15 acres. The 300 foot tall wind turbines impact 106,000 acres, destroy scenic vistas and kill tens of thousands of birds and bats every year - to provide expensive, tax-subsidized, intermittent, insufficient electricity.

3- The federal government has been investing in renewable power research and technology for decades, with virtually nothing to show for it. Billions of federal dollars are diverted to the renewable power industry every year, yet the industry still cannot come close to producing power anywhere near as economically as conventional fuel sources such as coal and gasoline.

4- The automotive, coal and oil industries will be hit the hardest by expensive new penalties and mandates regarding carbon dioxide production, increasing the cost of transportation and electrical power to the consumer.

5- A typical 1000 Mega Watt power station could burn about 3 million tons of coal per year requiring 300 trains per year to supply the coal. If Carbon, Capture and Burial is required, the extra power needed will call for another 150 trains of coal. And if trains were used to haul the captured CO<sub>2</sub>, the mass of material moved would require another 1150 trains per year, each train carrying 10,000 tons.

6- According to the United States Energy Information Administration economic models, last year's proposed Lieberman-Warner bill to reduce CO2 emissions, if passed, would have cost the average US household between \$4000 and \$7000 per year, would have increased unemployment by at least 2.5 percent, and would have reduced our Gross Domestic Product by 2.6 percent each and every year.

7- One side effect of Obama's cap-and-trade plan is the elimination of about 83,000 mining related jobs, 60,000 coal-energy power plant jobs, 31,000 coal transportation jobs and the tens of thousands of indirect jobs that produce products used by the coal sector.

8- California and Spain have proved that the war on carbon dioxide will kill real jobs faster than fake green jobs can be created. At the time, the silly claims that alternate energy can provide continuous, economical and reliable power will encourage neglect of US key reliable low cost electricity source- coal power. When the lights go out industry migrates to Asia and our power bills will soar and it will be too late to prevent great harm to our national economy, our jobs and our lifestyle.

9- The potential federal revenue stream from cap and trade boggles the mind. White House sources estimate at least \$72 billion per year in new funding for government coffers. They concede it could be much more, depending on auction prices. Who will foot the bill? Energy consumers of course, but those living in coal dependent regions will pay the most.

10- In the 15 mid-west states stretching from the Appalachians to the Rockies residential power bills will increase between \$20 and \$26 per month if the CO2

permit auction price is as low as \$20 per metric ton, but the price will likely be higher. Ohio will be hit the 6th hardest as a result of its energy sources.

## POLITICAL POSITIONS

1- Historically Michael Crichton said the claim of consensus in science has been the first refuge of scoundrels. It has been a way to avoid debate by claiming a matter to be settled. Whenever you hear that a consensus of scientists agree on something or other reach for your wallet because you are being scammed.

2- Since credible scientific evidence established that CO2 from mankind has little impact on temperature and none on public health, the net result of CO2 limitations will be a transfer of wealth and the ceding of more authority to the United Nations as a global government.

3- Once we accept the principle that carbon should be monitored, controlled and taxed, we open the door to the most invasive kind of bureaucratic meddling, and to all the carbon cops who want to stick their noses into every aspect of the way we live, whether it is the kind of car we drive, our holiday destination, our pleasure boat or even the food miles accrued in our choice of food.

4- Computer models of climate are now predicting that there will be no change in global temperature over the next ten years. In some cases, these predictions say no significant warming until 2030. Take your pick. If these models are so great, how did they miss the time-out we are experiencing from global warming?

5- Surely you have heard that nine of the ten warmest years recorded in the US lower 48 states since 1880

have occurred since 1995, with the hottest being 1998. Well, that also has been shown to be wrong. Less than a decade ago, the US government changed the way it recorded temperatures. No one thought to correlate the new temperatures with the old ones, until Canadian researcher Steve McIntyre did so correcting the record to show that 1934 was in fact the hottest year, with 1998 second and 1921 third. Four of the 10 hottest years were in the 1930s and only 3 in the past decade. Eight of the 15 hottest years in the past century occurred before carbon dioxide began its recent rise.

6- The world's largest coal supplies are situated in the US China and Russia which are all increasing their production. Electricity generated from coal in 2008 was a record with China increasing production by 200 million tons. Unilateral efforts to cut CO2 emissions in the face of this fact are therefore useless.

7- Representative Waxman and Markey's 648 page discussion draft of the climate bill with its descriptions of permitted light bulbs is so complex, confusing and impossible to understand, let alone implement without breaking some regulation, that it will make the old central planning of the soviet union seem like a back of the envelope outline by comparison.

8- The Precautionary Principle often claimed as reason to curtail CO2 emissions cuts both ways. If we make it harder or more expensive for people in Africa to use their coal it means they keep inhaling smoke from wood fires, babies get lung disease; forests are raised for fuel. Meanwhile electric trucks cost more to run and that makes fresh food more expensive, refrigerated meat is not available and malnutrition increases and money for medical research shrinks.

## PHILOSOPHICAL CONSIDERATIONS

1- There is no consensus of scientists in favor of human caused global warming. While opinion polls do not determine truth in science, more than 31,000 American Scientists signed a petition drafted by the Oregon Institute of Science and Medicine which stated: There is no convincing scientific evidence that human release of carbon dioxide, methane or other green house gases is causing or will in the foreseeable future cause catastrophic heating of the Earth Atmosphere and disruption of the Earth's climate.

2- While global warming is not currently happening perhaps we should wish it were. Far more premature deaths result from cold than from heat, longer growing seasons yield larger crops, respiratory and cardiovascular diseases increase in cold weather, increased precipitation in warm weather adds to water supply in water scarce areas. US heating bills will decline substantially.

3- Paradoxically, the world environment is likely to be damaged far more by misguided attempts to reduce carbon emissions than would be caused by man-made global warming even if it were real and continued unchecked. If third world countries were prevented from exploiting their natural resources to provide a better standard of living for their citizens, not only would their peoples continue to suffer poverty, disease, and low life expectancy, but they would not have the ability to protect their natural environments - only wealthy countries can afford to do so.

4- Nobody believes a weather prediction 7 days ahead

but now we are asked to reorder our economy based on climate predictions 100 years hence which are no longer supported by current evidence.

5- Carbon offsetting and trading schemes have the potential to make large profits for those who run them. You can not actually offset carbon emissions by planting trees as they merely store some of it for a while before releasing it once they rot or burn, and the storage will not even offset the emission for many, many years after planting. Plus, the earth would have to be covered entirely by trees to even theoretically counter the impact of man-made emissions.

6- Subsidies given to develop renewable energy sources such as wind power are a license to print money for their operators at the expense of the rest of us.

Companies promote green products that may be little more than gimmicks, but can be very profitable.

7- Although the court of public opinion already weigh climate change as a very low economic priority, the media continues to uncritically accept and vigorously promote shrill global warming alarmism.

8- The United States government budgets \$6 billion a year for climate research supporting a growing industry of scientists and university labs that specialize in the subject. it all adds up to a significant institutionalization of the impulse to treat carbon as a problem.

9- More than six decades of painstaking conservation efforts that have brought the majestic whooping crane back from the brink of extinction may come undone because of the proliferation of wind farms in the United States.

10- Although the Alaska Department of Fish and Game reports the global polar bear population is now between

20 and 25 thousand up from 8 to 10 thousand in 1960, the polar bear has been listed as a species threatened by global warming.

11- Climate change is not a scientific problem that found political support; this is about eco-activists and politicians who found a scientific issue they feel can leverage them into power and control. The environment is a great way to advance a political agenda that favors central planning and an intrusive government. What better way to control someone's property than to subordinate one's private property rights to environmental concerns.

## CONCLUSIONS

1- While the most extreme environmental zealots may be relatively few in number, they have managed to gain undue influence by exploiting the gullibility of many ordinary and scientifically illiterate people, who are only too willing to believe that the planet needs saving from man's excesses. Perhaps it is a psychological throwback to those earlier civilizations that offered human sacrifices to the gods, to assuage their sins and spare them from punishment in the form of drought, flood, famine or disease. There are certainly many parallels between modern environmentalism and religion.

2- By focusing our priorities on future generations we focus less on improving the lives of people who are alive today. These future generations bear no closer relationship to us than those now living in developing countries whose lives we disdain to save. Why are we not feeding people in the world who are hungry? Why are we not giving clean water to the almost one billion people who don't have clean water? The greatest source of environmental degradation is poverty. Why

aren't we helping eliminate poverty? One answer is that perhaps it is a lot easier worrying about future generations than trying to fix present day problems.

3- Global warming is a major industry today. Between 1992 and 2008 the US Government spent \$30 billion on climate change research and now contributes \$6 billion a year. This finances jobs, grants, conferences, international travel and academic journals. It not only keeps a huge army of people in comfortable employment, but also fills them with self righteousness and moral superiority regardless of the fact that real science did not support it.

It is clear that with the deep roots of the global warming scare it is not about to go away. It has the added advantage of not being able to be proven false in our life time. In the mean time the sanest course for us would be to gain what limited perspective we can (remembering the global cooling alarm of a generation ago) and proceed cautiously. We are going through a scare with many causes, and we need to step back from it, take a long second look at the scientific evidence, and not do anything rash.

---

**From:** "  
**To:** "Banner, Jay L" <banner@jsg.utexas.edu>  
**Cc:** "adessler@tamu.edu" <adessler@tamu.edu>; Charles Jackson <charles@ig.utexas.edu>; Gerald North <g-north@tamu.edu>; Steve Goreham <Steve.Goreham@tamu.edu>; Gerald North <Gerald.North@tamu.edu>; Jay Lehr <Jay.Lehr@tamu.edu>; John Dunn <John.Dunn@tamu.edu>; "katharine.hayhoe@ttu.edu" <katharine.hayhoe@ttu.edu>; Zong Liang Yang <liang@mail.utexas.edu>; Seldon Graham <Seldon.Graham@tamu.edu>; "steve.holditch@pe.tamu.edu" <steve.holditch@pe.tamu.edu>; "toby.baker@governor.state.tx.us" <toby.baker@governor.state.tx.us>  
**Sent:** Sun, January 10, 2010 12:27:08 PM  
**Subject:** RE: A simple question

Thanks Dr. Banner (Jay). I appreciate feedback from a dedicated earth scientist such as yourself.

Although it puts me on a limb with a lot of people, the anthropogenic warming issue is too critical for our future to stay quiet about. I feel I am sort of an "add-on" to the Texas conversation going on, but very supportive of an effort to get the rush to CO2 control halted, as I am a confirmed skeptic of the

hypothesis of climate disaster. Not sure if you read this piece I did last month:

[http://www.americanthinker.com/2009/12/clearing\\_the\\_air\\_on\\_the\\_clean.html](http://www.americanthinker.com/2009/12/clearing_the_air_on_the_clean.html)

I will always welcome any pointed serious critique, but remain unconvinced the AGW alarmists are correct to be alarmed.

( I tried to find the Austin Statesman letter you mention via the Web, but could not. Please send a link or copy if you have one.)

Best of everything.

Harvey

From:  
Harvey M. Sheldon  
Personally  
222 North LaSalle Street  
Chicago, IL 60601-1081

Tel. 312-704-3504  
Fax 312-704-3001  
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"Banner, Jay L" <banner@jsg.utexas.edu>

01/08/2010 05:51 PM

To ' < Gerald  
North <g-north@tamu.edu>  
cc "adessler@tamu.edu" <adessler@tamu.edu>, Charles Jackson  
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Subject RE: A simple question

Mr. Sheldon,

I agree with you that Texas should have its own panel of experts to consider what the best info is on climate change and its potential impact on our state.

You may also be interested in a letter to the editor in today's Austin American Statesman entitled



[toBY.baker@governor.state.tx.us](mailto:toBY.baker@governor.state.tx.us)

Subject Re: A simple question

Sorry, Mr. Sheldon,

I am not a biologist and I can only give answers for the elementary questions as one one I provided to Mr. Graham. I wish I knew enough to go over the Key Finding you list. I do understand several of them and I cannot disagree with the ones I understand. In my opinion many of these are good. Again it is a question of who will be the winners and who will be the losers. Picking is not science.

Then you went to Beck. Since I never heard of him (hardly an insult), I plugged Beck and CO2 into google and found myself at a 2007 post on RealClimate, a blog that I read only when someone sends me there (thanks, I guess).

<http://www.realclimate.org/index.php/archives/2007/05/beck-to-the-future/>

This looks like a pretty good explanation of Beck's work.

By the way, one of the world experts is in the Windy City at the U of C, David Archer. You might check his website for some of those 1000 year adjustment times. He is a formidable scientist.

Jerry

On Jan 7, 2010, at 1:55 PM, . wrote:

Dr. North, I have been trying to keep to a quiet back seat on this whole "simple question" business. So forgive me if my self-control has temporarily failed, and please allow me to throw another snowball from right field. (It's snowing darned hard in Chicago today).

First, I suppose (or at least have no immediate basis to disagree that) it is perfectly correct to say that carbon dioxide released by fossil fuel combustion is from deposits that would otherwise lay sequestered in the earth. First question, is that so bad? Before you respond, please consider the following observations of the Non-Governmental International Panel on Climate Change:

- A 300-ppm increase in the air's CO<sub>2</sub> content typically raises the productivity of most herbaceous plants by about one-third; and this positive response occurs in plants that utilize all three of the major biochemical pathways (C<sub>3</sub>, C<sub>4</sub>, CAM) of photosynthesis. For woody plants, the response is even greater. The productivity benefits of CO<sub>2</sub> enrichment are also experienced by aquatic plants, including freshwater algae and macrophytes, and marine microalgae and macroalgae.
- The amount of carbon plants gain per unit of water lost-or water-use efficiency-typically rises as the CO<sub>2</sub> content of the air rises, greatly increasing their ability to withstand drought. In addition, the CO<sub>2</sub>-induced percentage increase in plant biomass production is often greater under water-stressed conditions than it is when plants are well watered.
- Atmospheric CO<sub>2</sub> enrichment helps ameliorate the detrimental effects of several environmental stresses on plant growth and development, including high soil salinity, high air temperature, low light intensity and low levels of soil fertility. Elevated levels of CO<sub>2</sub> have additionally been demonstrated to reduce the severity of low temperature stress, oxidative stress, and the stress of herbivory. In fact, the percentage growth enhancement produced by an increase in the air's CO<sub>2</sub> concentration is often even greater under stressful and resource-limited conditions than it is when growing conditions are ideal.
- As the air's CO<sub>2</sub> content continues to rise, plants will likely exhibit enhanced rates of photosynthesis and biomass production that will not be diminished by any global warming that might occur concurrently. In fact, if the ambient air temperature rises, the growth-promoting effects of atmospheric CO<sub>2</sub> enrichment will likely also rise, becoming more and more robust.
- The ongoing rise in the air's CO<sub>2</sub> content likely will not favor the growth of weedy species over that of crops and native plants.
- The growth of plants is generally not only enhanced by CO<sub>2</sub>-induced increases in net photosynthesis during the light period of the day, it is also enhanced by CO<sub>2</sub>-induced decreases in respiration during the dark period.
- The ongoing rise in the air's CO<sub>2</sub> content, as well as any degree of warming that might possibly accompany it, will not materially alter the rate of decomposition of the world's soil organic matter and will probably enhance biological carbon sequestration. Continued increases in the air's CO<sub>2</sub> concentration and temperature will not result in massive losses of carbon from earth's peatlands. To the contrary, these environmental changes-if they persist-would likely work together to enhance carbon capture.
- Other biological effects of CO<sub>2</sub> enhancement include enhanced plant nitrogen-use efficiency, longer residence time of carbon in the soil, and increased populations of earthworms and soil nematodes.
- The aerial fertilization effect of the ongoing rise in the air's CO<sub>2</sub> concentration (which greatly enhances vegetative productivity) and its anti-transpiration effect (which enhances plant water-use efficiency and enables plants to grow in areas that were once too dry for them) are stimulating plant growth across the globe in places that previously were too dry or otherwise unfavorable for plant growth, leading to a significant greening of the Earth.
- Elevated CO<sub>2</sub> reduces, and nearly always overrides, the negative effects of ozone pollution on plant photosynthesis, growth and yield. It also reduces atmospheric concentrations of isoprene, a highly reactive non-methane hydrocarbon that is emitted in copious quantities by vegetation and is responsible for the production of vast amounts of tropospheric ozone.

Second question: As I understand the IPCC (UN Panel) argument (and it is an argument or hypothesis), the lifetime of this carbon in the atmosphere is many decades at least. Some people have published arguments that it is a thousand years or more. Now, one can readily see that there might be a cumulative effect of some considerable duration were this true, if fossil fuel use persists or increases (without CO<sub>2</sub> control), and if nothing happens to absorb or otherwise send CO<sub>2</sub> elsewhere than the atmosphere. However, a host of prior literature puts CO<sub>2</sub> life at between 5 and 15 years. What gives?

Similarly, how do you explain Dr. Ernst Beck's graph, which shows a variability in CO<sub>2</sub> since 1826, including a downturn in the mid-20th century? Surely something is grabbing or venting CO<sub>2</sub>, and it does not just "pile up". Another way to ask this is what is the basis for your assertion that there is a limit to CO<sub>2</sub> absorption and it has been reached? Another subset question is: would not heartier plants absorb ever more CO<sub>2</sub>?

This is from [www.icecap.us](http://www.icecap.us), by import from: <http://www.biomind.de/realCO2/>

"

I am sorry I do not have a whole lot of time to further question, and I know we may get into a discussion of isotopes and such if I did. I would only note to you that Seldon Graham's "simple question" makes a lot more common sense if one takes account of the data and evidence that the atmosphere is capable of throwing off a lot more heat than the IPCC calculations assume, and that the CO2 issue is not as simple as you portray it by your implicit suggestion (I surmise) that "every CO2 molecule not already in some existing state of nature other than the fossil fuel deposits is abnormal and a big problem." If that were so, why aren't the IPCC predictions holding true re rate of CO2 rise, temperature rise, etc. A goodly number of other scientists than Beck, including Drs Gray (more than one of those) and Lindzen and others have documented how darned normal the current carbon dioxide situation is, and how much more of it is coming from oceans and other natural reservoirs than the IPCC asserts.

For all I know, you may agree with me that it is unwise to place the control of fuel combustion in the hands of central planners in Washington. I am certain it will ruin America's vitality and free enterprise culture, and that it is being done based on way way overstated alarmism. I greatly respect the calling of science; i just wish that the development of data and hypotheses that have been involved in the climate issue were trustworthy. Too many signs and examples of "our way or the highway" thinking and actions by people with agendas have come to light to allow this issue to go unexamined by people concerned about this country's future.

Gotta go. Just couldn't let an ornery old Army officer like Seldon Graham have to stand alone.

From:

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Tax Advice Disclosure: To ensure compliance with the Internal Revenue Service regulations governing the issuance of advice on Federal tax issues, we advise you that any tax advice in this communication (and any attachments) is not written with the intent that it be used, and cannot be used, to avoid penalties that may be imposed under the Internal Revenue Code.

This website documents my latest research on the history of carbon dioxide gas analysis. My work had been published by several journals and had been presented at national and international meetings. In literature we can find more than 200 000 directly measured CO2 data since 1800 from which I have estimated the annual CO2 background averages since 1826 to 1960, the end of the measurements by chemical methods. IPCC prefers ice core reconstructions. This new data set reveals remarkable coherence with other geophysical timeseries. Please feel free to check data, methods, stations and historical literature. Comments are welcome.

<mime-attachment.jpeg>

**Fig. 1** Atmospheric CO2 background level 1826 – 1960. CO2 MBL estimation 1826- 1960 from directly measured data (Beck 2009); black line smoothed by a Savitzky-Golay filter, grey area= estimated error range).Savitzky Golay smoothing parameters : width of the moving window: 5, order: 2; passes: 3.  
(> 400 papers, >200 000 raw samples, > 100 000 selected for MBL estimation)"

explanation of isotopes and such

Mr. Graham,

Let's go over this one point again. While I do not favor ethanol solutions to our problem, let me explain why that pound of CO2 from ethanol burning is not adding to the atmosphere. The point is that in producing the ethanol a pound of so of CO2 is extracted from the atmospheric reservoir. Whereas when you produce a pound of CO2 from coal it comes from the atmosphere as it was a hundred or more millions of years ago. This stuff has been buried all that time and out of reach. So the ethanol thing just removes a little and returns it to the atmosphere. It does not cause the concentration of CO2 to go up.

Andy is still waiting for your call. He promises to be nice.

Jerry

On Jan 7, 2010, at 12:21 PM, Seldon Graham wrote:

Dr. North:

Thank you for responding and giving me your best shot, even though it certainly does not come close to answering my simple question in the Austin American-Statesman, 12-23-09.

With all due respect, you are making political arguments instead of following the scientific method of proof. There is a total absence of reproducible test results of an hypothesis. The "moral choice" argument is the last refuge of losing debaters.

Assume, for the sake of your political arguments, that the current Democratic Party / Obama energy agenda has already succeeded — thereby destroying the oil industry in Texas and the rest of the United States, which includes the Texas A&M Petroleum Engineering Department — by replacing all liquid vehicle fuel in the United States with ethanol, there would be about a pound **more** of carbon dioxide emitted into the atmosphere for every gallon of gasoline that the ethanol replaces. [The Wall Street Journal, 10-8-09, p. A16, "New CO2 Rules Will Have Many Strange Consequences."] Thus, the current Democratic Party / Obama energy agenda will cause **more**, not less, carbon dioxide emissions into the atmosphere.

Does it not seem strange to you that so-called "climate scientists" who allegedly want to decrease carbon dioxide emissions into the atmosphere are, in fact, advocating an agenda which **increases** carbon dioxide emissions into the atmosphere? It seems quite insane to me, but that's just my opinion. Because this expensive insanity is paid for by taxpayers, it also seems quite un-American to me, but, again, that's just my opinion.

Obviously, your particular "climate science community" — which does not include Lindzen, Singer, Michaels, Christy or any of the 9,000 Ph.D.s signing the Oregon Institute of Science and Medicine petition project — cannot answer my simple question.

Again, thank you for responding, which is something that Secretary Steven Chu and Science Czar John Holdren did not do.

Seldon B. Graham, Jr.

On Jan 6, 2010, at 11:42 AM, Gerald North wrote:

Hi Mr. Graham,

One last time. From your letter to the editor.

The question for scientists is whether CO<sub>2</sub> increases cause a global warming and if so how much. The climate science community has settled on the answer that it does cause warming and by a range of from about 1.5 C to 4.5 C for CO<sub>2</sub> doubling. Is this bad? Well it is if the top of the range is true, not so bad if the bottom holds. If the average over the range happens, there will be winners and losers. Anyone deciding on how to handle this will be making choices that affect people differently. These last are not scientific questions. They are moral choices. My opinion on the subject is no better than anyone else's since how do we really decide on one person's loss over another's gain?

But if you want my opinion it is that the likelihood of serious negative consequences for most humans is large enough that perhaps we should take some precautionary measures seriously. For example, conservation, cutting on imported energy sources that could compromise our national security to name a few. Since at least some of these measures are likely to be adopted, why not get the jump on our foreign competitors and move on some of the technologies that have been discussed. Texas is likely to be a big winner if we do, since we are loaded with opportunities here (wind, sun, etc).

In another decade of research we will have squared away a lot of our uncertainties about forced climate change. As this approaches we can be thinking about what to do if the warming does indeed appear to be caused by humans and to what extent things are changing as result.

I hope this answers your question. If you have further questions I suggest that you phone Professor Andrew Dessler. He has volunteered to continue the conversation via phone: (979) 862-1427.

Jerry North

On Jan 6, 2010, at 9:58 AM, Seldon Graham wrote:

Dr. North:

Thank you for your response.

Yes, I am really seeking a scientific answer to my question. No, the answer is not perfectly obvious to me or, for that matter, to the public. What is that perfectly obvious answer?

Seldon B. Graham, Jr.

On Jan 5, 2010, at 1:02 PM, Gerald North wrote:

Dear Mr. Graham,

Thanks for your hard copy letter, but as I said in my email to Charles, I am not really sure you are seeking an answer, especially since it is perfectly obvious.

Sincerely,  
Jerry

On Jan 5, 2010, at 11:29 AM, Seldon Graham wrote:

A simple scientific answer will perfectly satisfy "this guy." But, no scientist has yet been able to answer my question.

No *ad hominem* attacks have been made by me. I have just asked a simple question which no scientist seems able to answer.

Seldon B. Graham, Jr.  
"This guy"

On Jan 2, 2010, at 12:16 PM, Gerald North wrote:

Hi Charles,

You will never satisfy this guy. He will tie you in knots and never change. I received many hostile emails (one saying he would contact the Texas Attorney General to have me fired) after my interview in Andrew Freedman's blog at the Washington Post. I simply ignore them.

Best,  
Jerry

Gerald North <[g-](#)>

[north@tamu.edu](mailto:north@tamu.edu)>  
Sent by: Gerald North  
<

01/07/2010 12:55 PM

To Seldon Graham <  
cc Charles Jackson <[charles@ig.utexas.edu](mailto:charles@ig.utexas.edu)>, Jay Banner <[banner@mail.utexas.edu](mailto:banner@mail.utexas.edu)>, Zong Liang  
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Subject Re: A simple question

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**From:**  
**To:** [Banner, Jay L](mailto:Banner, Jay L)  
**Cc:** [adessler@tamu.edu](mailto:adessler@tamu.edu); [Charles Jackson](mailto:Charles Jackson); [Gerald North](mailto:Gerald North); [Steve Goreham](mailto:Steve Goreham); [Gerald North](mailto:Gerald North); [Jay Lehr](mailto:Jay Lehr); [John Dunn](mailto:John Dunn); [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu); [Zong Liang Yang](mailto:Zong Liang Yang); [Seldon Graham](mailto:Seldon Graham); [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu); [toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)  
**Subject:** RE: A simple question  
**Date:** Sunday, January 10, 2010 11:27:26 AM

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Thanks Dr. Banner (Jay). I appreciate feedback from a dedicated earth scientist such as yourself.

Although it puts me on a limb with a lot of people, the anthropogenic warming issue is too critical for our future to stay quiet about. I feel I am sort of an "add-on" to the Texas conversation going on, but very supportive of an effort to get the rush to CO2 control halted, as I am a confirmed skeptic of the hypothesis of climate disaster. Not sure if you read this piece I did last month:  
[http://www.americanthinker.com/2009/12/clearing\\_the\\_air\\_on\\_the\\_clean.html](http://www.americanthinker.com/2009/12/clearing_the_air_on_the_clean.html)

I will always welcome any pointed serious critique, but remain unconvinced the AGW alarmists are correct to be alarmed.

( I tried to find the Austin Statesman letter you mention via the Web, but could not. Please send a link or copy if you have one.)

Best of everything.

Harvey

From:  
Harvey M. Sheldon  
Personally  
222 North LaSalle Street  
Chicago, IL 60601-1081

Tel. 312-704-3504  
Fax 312-704-3001  
E-Mail:

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"Banner, Jay L" <[banner@jsg.utexas.edu](mailto:banner@jsg.utexas.edu)>

01/08/2010 05:51 PM

To ' Gerald  
North <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
cc "adessler@tamu.edu" <[adessler@tamu.edu](mailto:adessler@tamu.edu)>, Charles Jackson  
<[charles@ig.utexas.edu](mailto:charles@ig.utexas.edu)>, Steve Goreham  
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Jay Lehr < John Dunn <[jddmdjd@web-access.net](mailto:jddmdjd@web-access.net)>, [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu)"  
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<[toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)>

Subject RE: A simple question

Mr. Sheldon,

I agree with you that Texas should have its own panel of experts to consider what the best info is on climate change and its potential impact on our state.

You may also be interested in a letter to the editor in today's Austin American Statesman entitled "Carbon dioxide primer" that addresses the question of why there is a focus on fossil fuel sources of atmospheric CO<sub>2</sub>.

Jay

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**Sent:** Thursday, January 07, 2010 4:12 PM  
**To:** Gerald North  
**Cc:** adessler@tamu.edu; Jay Banner; Charles Jackson; Steve Goreham; Gerald North; Jay Lehr; John Dunn; katharine.hayhoe@ttu.edu; Zong Liang Yang; Seldon Graham; steve.holditch@pe.tamu.edu; toby.baker@governor.state.tx.us  
**Subject:** Re: A simple question

Sorry Dr. North, I presumed incorrectly you were into the physics of the questions. I appreciate your response. As to RealClimate and Dr. Beck, I only know that RealClimate is basically a site that has been supported and voiced the opinions of several of the very people who are implicated by the "Climategate" e-mails in causing inappropriate data manipulation, erasures or data and other seriously questionable attempts to influence what gets published. A friend of mine who is a physicist repeatedly cited that site, too. He and that site are thumping the IPCC book as gospel, when it is in my mind clearly not. RealClimate has gained what I think is unfounded trust among many scientists, but its faults are also now being noticed.

I will leave it to other scientists than Beck (who I am sure has critics, as do we all) to speak further, and otherwise wish you and all concerned the best. Although many have been in the best of faith, this issue has been overhyped, oversold, hijacked, and distorted for political ends; it needs a thorough investigation by a truly trustworthy panel of investigators. No state, especially Texas, should let the federal government get away with putting this chokehold on the American economy.

From:  
Harvey M. Sheldon  
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Tel. 312-704-3504  
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steve.holditch@pe.tamu.edu,  
Subject Re: A simple question

Sorry, Mr. Sheldon,

I am not a biologist and I can only give answers for the elementary questions as one one I provided to Mr. Graham. I wish I knew enough to go over the Key Finding you list. I do understand several of them and I cannot disagree with the ones I understand. In my opinion many of these are good. Again it is a question of who will be the winners and who will be the losers. Picking is not science.

Then you went to Beck. Since I never heard of him (hardly an insult), I plugged Beck and CO2 into google and found myself at a 2007 post on RealClimate, a blog that I read only when someone sends me there (thanks, I guess).

<http://www.realclimate.org/index.php/archives/2007/05/beck-to-the-future/>

This looks like a pretty good explanation of Beck's work.

By the way, one of the world experts is in the Windy City at the U of C, David Archer. You might check his website for some of those 1000 year adjustment times. He is a formidable scientist.

Jerry

On Jan 7, 2010, at 1:55 PM,

wrote:

Dr. North, I have been trying to keep to a quiet back seat on this whole "simple question" business. So

forgive me if my self-control has temporarily failed, and please allow me to throw another snowball from right field. (It's snowing darned hard in Chicago today).

First, I suppose (or at least have no immediate basis to disagree that) it is perfectly correct to say that carbon dioxide released by fossil fuel combustion is from deposits that would otherwise lay sequestered in the earth. First question, is that so bad? Before you respond, please consider the following observations of the Non-Governmental International Panel on Climate Change:

#### Chapter 7 Key Findings

- A 300-ppm increase in the air's CO<sub>2</sub> content typically raises the productivity of most herbaceous plants by about one-third; and this positive response occurs in plants that utilize all three of the major biochemical pathways (C<sub>3</sub>, C<sub>4</sub>, CAM) of photosynthesis. For woody plants, the response is even greater. The productivity benefits of CO<sub>2</sub> enrichment are also experienced by aquatic plants, including freshwater algae and macrophytes, and marine microalgae and macroalgae.
- The amount of carbon plants gain per unit of water lost-or water-use efficiency-typically rises as the CO<sub>2</sub> content of the air rises, greatly increasing their ability to withstand drought. In addition, the CO<sub>2</sub>-induced percentage increase in plant biomass production is often greater under water-stressed conditions than it is when plants are well watered.
- Atmospheric CO<sub>2</sub> enrichment helps ameliorate the detrimental effects of several environmental stresses on plant growth and development, including high soil salinity, high air temperature, low light intensity and low levels of soil fertility. Elevated levels of CO<sub>2</sub> have additionally been demonstrated to reduce the severity of low temperature stress, oxidative stress, and the stress of herbivory. In fact, the percentage growth enhancement produced by an increase in the air's CO<sub>2</sub> concentration is often even greater under stressful and resource-limited conditions than it is when growing conditions are ideal.
- As the air's CO<sub>2</sub> content continues to rise, plants will likely exhibit enhanced rates of photosynthesis and biomass production that will not be diminished by any global warming that might occur concurrently. In fact, if the ambient air temperature rises, the growth-promoting effects of atmospheric CO<sub>2</sub> enrichment will likely also rise, becoming more and more robust.
- The ongoing rise in the air's CO<sub>2</sub> content likely will not favor the growth of weedy species over that of crops and native plants.
- The growth of plants is generally not only enhanced by CO<sub>2</sub>-induced increases in net photosynthesis during the light period of the day, it is also enhanced by CO<sub>2</sub>-induced decreases in respiration during the dark period.
- The ongoing rise in the air's CO<sub>2</sub> content, as well as any degree of warming that might possibly accompany it, will not materially alter the rate of decomposition of the world's soil organic matter and will probably enhance biological carbon sequestration. Continued increases in the air's CO<sub>2</sub> concentration and temperature will not result in massive losses of carbon from earth's peatlands. To the contrary, these environmental changes-if they persist-would likely work together to enhance carbon capture.
- Other biological effects of CO<sub>2</sub> enhancement include enhanced plant nitrogen-use efficiency, longer residence time of carbon in the soil, and increased populations of earthworms and soil nematodes.
- The aerial fertilization effect of the ongoing rise in the air's CO<sub>2</sub> concentration (which greatly enhances vegetative productivity) and its anti-transpiration effect (which enhances plant water-use efficiency and enables plants to grow in areas that were once too dry for them) are stimulating plant growth across the globe in places that previously were too dry or otherwise unfavorable for plant growth, leading to a significant greening of the Earth.
- Elevated CO<sub>2</sub> reduces, and nearly always overrides, the negative effects of ozone pollution on plant photosynthesis, growth and yield. It also reduces atmospheric concentrations of isoprene, a highly reactive non-methane hydrocarbon that is emitted in copious quantities by vegetation and is responsible for the production of vast amounts of tropospheric ozone.

Second question: As I understand the IPCC (UN Panel) argument (and it is an argument or hypothesis), the lifetime of this carbon in the atmosphere is many decades at least. Some people have published arguments that it is a thousand years or more. Now, one can readily see that there might be a cumulative effect of some considerable duration were this true, if fossil fuel use persists or increases

(without CO2 control), and if nothing happens to absorb or otherwise send CO2 elsewhere than the atmosphere. However, a host of prior literature puts CO2 life at between 5 and 15 years. What gives?

Similarly, how do you explain Dr. Ernst Beck's graph, which shows a variability in CO2 since 1826, including a downturn in the mid-20th century? Surely something is grabbing or venting CO2, and it does not just "pile up". Another way to ask this is what is the basis for your assertion that there is a limit to CO2 absorption and it has been reached? Another subset question is: would not heartier plants absorb ever more CO2?

This is from [www.icecap.us](http://www.icecap.us), by import from: <http://www.biomind.de/realCO2/>

"

I am sorry I do not have a whole lot of time to further question, and I know we may get into a discussion of isotopes and such if I did. I would only note to you that Seldon Graham's "simple question" makes a lot more common sense if one takes account of the data and evidence that the atmosphere is capable of throwing off a lot more heat than the IPCC calculations assume, and that the CO2 issue is not as simple as you portray it by your implicit suggestion (I surmise) that "every CO2 molecule not already in some existing state of nature other than the fossil fuel deposits is abnormal and a big problem." If that were so, why aren't the IPCC predictions holding true re rate of CO2 rise, temperature rise, etc. A goodly number of other scientists than Beck, including Drs Gray (more than one of those) and Lindzen and others have documented how darned normal the current carbon dioxide situation is, and how much more of it is coming from oceans and other natural reservoirs than the IPCC asserts.

For all I know, you may agree with me that it is unwise to place the control of fuel combustion in the hands of central planners in Washington. I am certain it will ruin America's vitality and free enterprise culture, and that it is being done based on way way overstated alarmism. I greatly respect the calling of science; i just wish that the development of data and hypotheses that have been involved in the climate issue were trustworthy. Too many signs and examples of "our way or the highway" thinking and actions by people with agendas have come to light to allow this issue to go unexamined by people concerned about this country's future.

Gotta go. Just couldn't let an ornery old Army officer like Seldon Graham have to stand alone.

From:

Harvey M. Sheldon  
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Chicago, IL 60601-1081

Tel. 312-704-3504

Fax 312-704-3001

E-Mail:

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This website documents my latest research on the history of carbon dioxide gas analysis.

My work had been published by several journals and had been presented at national and international meetings. In literature we can find more than 200 000 directly measured CO2 data since 1800 from which I have estimated the annual CO2 background averages since 1826 to 1960, the end of the measurements by chemical methods. IPCC prefers ice core reconstructions. This new data set reveals remarkable coherence with other geophysical timeseries. Please feel free to check data, methods, stations and historical literature. Comments are welcome.

<mime-attachment.jpeg>

**Fig. 1** Atmospheric CO2 background level 1826 – 1960. CO2 MBL estimation 1826- 1960 from directly measured data (Beck 2009); black line smoothed by a Savitzky-Golay filter, grey area= estimated error range).Savitzky Golay smoothing parameters : width of the moving window: 5, order: 2; passes: 3.  
(> 400 papers, >200 000 raw samples, > 100 000 selected for MBL estimation)"

explanation of isotopes and such

Mr. Graham,

Let's go over this one point again. While I do not favor ethanol solutions to our problem, let me explain why that pound of CO2 from ethanol burning is not adding to the atmosphere. The point is that in producing the ethanol a pound of so of CO2 is extracted from the atmospheric reservoir. Whereas when you produce a pound of CO2 from coal it comes from the atmosphere as it was a hundred or more millions of years ago. This stuff has been buried all that time and out of reach. So the ethanol thing just removes a little and returns it to the atmosphere. It does not cause the concentration of CO2 to go up.

Andy is still waiting for your call. He promises to be nice.

Jerry

On Jan 7, 2010, at 12:21 PM, Seldon Graham wrote:

Dr. North:

Thank you for responding and giving me your best shot, even though it certainly does not come close to answering my simple question in the Austin American-Statesman, 12-23-09.

With all due respect, you are making political arguments instead of following the scientific method of proof. There is a total absence of reproducible test results of an hypothesis. The "moral choice" argument is the last refuge of losing debaters.

Assume, for the sake of your political arguments, that the current Democratic Party / Obama

energy agenda has already succeeded — thereby destroying the oil industry in Texas and the rest of the United States, which includes the Texas A&M Petroleum Engineering Department — by replacing all liquid vehicle fuel in the United States with ethanol, there would be about a pound **more** of carbon dioxide emitted into the atmosphere for every gallon of gasoline that the ethanol replaces. [The Wall Street Journal, 10-8-09, p. A16, "New CO2 Rules Will Have Many Strange Consequences."] Thus, the current Democratic Party / Obama energy agenda will cause **more**, not less, carbon dioxide emissions into the atmosphere.

Does it not seem strange to you that so-called "climate scientists" who allegedly want to decrease carbon dioxide emissions into the atmosphere are, in fact, advocating an agenda which **increases** carbon dioxide emissions into the atmosphere? It seems quite insane to me, but that's just my opinion. Because this expensive insanity is paid for by taxpayers, it also seems quite un-American to me, but, again, that's just my opinion.

Obviously, your particular "climate science community" — which does not include Lindzen, Singer, Michaels, Christy or any of the 9,000 Ph.D.s signing the Oregon Institute of Science and Medicine petition project — cannot answer my simple question.

Again, thank you for responding, which is something that Secretary Steven Chu and Science Czar John Holdren did not do.

Seldon B. Graham, Jr.

On Jan 6, 2010, at 11:42 AM, Gerald North wrote:

Hi Mr. Graham,

One last time. From your letter to the editor.

The question for scientists is whether CO2 increases cause a global warming and if so how much. The climate science community has settled on the answer that it does cause warming and by a range of from about 1.5 C to 4.5 C for CO2 doubling. Is this bad? Well it is if the top of the range is true, not so bad if the bottom holds. If the average over the range happens, there will be winners and losers. Anyone deciding on how to handle this will be making choices that affect people differently. These last are not scientific questions. They are moral choices. My opinion on the subject is no better than anyone else's since how do we really decide on one person's loss over another's gain?

But if you want my opinion it is that the likelihood of serious negative consequences for most humans is large enough that perhaps we should take some precautionary measures seriously. For example, conservation, cutting on imported energy sources that could compromise our national security to name a few. Since at least some of these measures are likely to be adopted, why not get the jump on our foreign competitors and move on some of the technologies that have been discussed. Texas is likely to be a big winner if we do, since we are loaded with opportunities here (wind, sun, etc).

In another decade of research we will have squared away a lot of our uncertainties about forced climate change. As this approaches we can be thinking about what to do if the warming does indeed appear to be caused by humans and to what extent things are changing

as result.

I hope this answers your question. If you have further questions I suggest that you phone Professor Andrew Dessler. He has volunteered to continue the conversation via phone: (979) 862-1427.

Jerry North

On Jan 6, 2010, at 9:58 AM, Seldon Graham wrote:

Dr. North:

Thank you for your response.

Yes, I am really seeking a scientific answer to my question. No, the answer is not perfectly obvious to me or, for that matter, to the public. What is that perfectly obvious answer?

Seldon B. Graham, Jr.

On Jan 5, 2010, at 1:02 PM, Gerald North wrote:

Dear Mr. Graham,

Thanks for your hard copy letter, but as I said in my email to Charles, I am not really sure you are seeking an answer, especially since it is perfectly obvious.

Sincerely,  
Jerry

On Jan 5, 2010, at 11:29 AM, Seldon Graham wrote:

A simple scientific answer will perfectly satisfy "this guy." But, no scientist has yet been able to answer my question.

No *ad hominem* attacks have been made by me. I have just asked a simple question which no scientist seems able to answer.

Seldon B. Graham, Jr.  
"This guy"

On Jan 2, 2010, at 12:16 PM, Gerald North wrote:

Hi Charles,

You will never satisfy this guy. He will tie you in knots and never change. I received many hostile emails (one saying he would contact the Texas Attorney General to have me fired) after my interview in Andrew Freedman's blog at the Washington Post. I simply ignore them.

Best,  
Jerry

Gerald North <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
Sent by: Gerald North  
<

01/07/2010 12:55 PM

To Seldon Graham <  
cc Charles Jackson <[charles@ig.utexas.edu](mailto:charles@ig.utexas.edu)>, Jay Banner <[banner@mail.utexas.edu](mailto:banner@mail.utexas.edu)>, Zong Liang Yang <[liang@mail.utexas.edu](mailto:liang@mail.utexas.edu)>, [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu), Jay Lehr <  
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Subject Re: A simple question

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**Subject:** RE: A simple question  
**Date:** Friday, January 08, 2010 5:53:11 PM

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Mr. Sheldon,

I agree with you that Texas should have its own panel of experts to consider what the best info is on climate change and its potential impact on our state.

You may also be interested in a letter to the editor in today's Austin American Statesman entitled "Carbon dioxide primer" that addresses the question of why there is a focus on fossil fuel sources of atmospheric CO2.

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from right field. (It's snowing darned hard in Chicago today).

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#### Chapter 7 Key Findings

- A 300-ppm increase in the air's CO<sub>2</sub> content typically raises the productivity of most herbaceous plants by about one-third; and this positive response occurs in plants that utilize all three of the major biochemical pathways (C<sub>3</sub>, C<sub>4</sub>, CAM) of photosynthesis. For woody plants, the response is even greater. The productivity benefits of CO<sub>2</sub> enrichment are also experienced by aquatic plants, including freshwater algae and macrophytes, and marine microalgae and macroalgae.
- The amount of carbon plants gain per unit of water lost-or water-use efficiency-typically rises as the CO<sub>2</sub> content of the air rises, greatly increasing their ability to withstand drought. In addition, the CO<sub>2</sub>-induced percentage increase in plant biomass production is often greater under water-stressed conditions than it is when plants are well watered.
- Atmospheric CO<sub>2</sub> enrichment helps ameliorate the detrimental effects of several environmental stresses on plant growth and development, including high soil salinity, high air temperature, low light intensity and low levels of soil fertility. Elevated levels of CO<sub>2</sub> have additionally been demonstrated to reduce the severity of low temperature stress, oxidative stress, and the stress of herbivory. In fact, the percentage growth enhancement produced by an increase in the air's CO<sub>2</sub> concentration is often even greater under stressful and resource-limited conditions than it is when growing conditions are ideal.
- As the air's CO<sub>2</sub> content continues to rise, plants will likely exhibit enhanced rates of photosynthesis and biomass production that will not be diminished by any global warming that might occur concurrently. In fact, if the ambient air temperature rises, the growth-promoting effects of atmospheric CO<sub>2</sub> enrichment will likely also rise, becoming more and more robust.
- The ongoing rise in the air's CO<sub>2</sub> content likely will not favor the growth of weedy species over that of crops and native plants.
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- The ongoing rise in the air's CO<sub>2</sub> content, as well as any degree of warming that might possibly accompany it, will not materially alter the rate of decomposition of the world's soil organic matter and will probably enhance biological carbon sequestration. Continued increases in the air's CO<sub>2</sub> concentration and temperature will not result in massive losses of carbon from earth's peatlands. To the contrary, these environmental changes-if they persist-would likely work together to enhance carbon capture.
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- Elevated CO<sub>2</sub> reduces, and nearly always overrides, the negative effects of ozone pollution on plant photosynthesis, growth and yield. It also reduces atmospheric concentrations of isoprene, a highly reactive non-methane hydrocarbon that is emitted in copious quantities by vegetation and is responsible for the production of vast amounts of tropospheric ozone.

Second question: As I understand the IPCC (UN Panel) argument (and it is an argument or hypothesis), the lifetime of this carbon in the atmosphere is many decades at least. Some people have published arguments that it is a thousand years or more. Now, one can readily see that there might be a cumulative effect of some considerable duration were this true, if fossil fuel use persists or increases (without CO<sub>2</sub> control), and if nothing happens to absorb or otherwise send CO<sub>2</sub> elsewhere than the atmosphere. However, a host of prior literature puts CO<sub>2</sub> life at between 5 and 15 years. What gives?

Similarly, how do you explain Dr. Ernst Beck's graph, which shows a variability in CO2 since 1826, including a downturn in the mid-20th century? Surely something is grabbing or venting CO2, and it does not just "pile up". Another way to ask this is what is the basis for your assertion that there is a limit to CO2 absorption and it has been reached? Another subset question is: would not heartier plants absorb ever more CO2?

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Gotta go. Just couldn't let an ornery old Army officer like Seldon Graham have to stand alone.

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This website documents my latest research on the history of carbon dioxide gas analysis. My work had been published by several journals and had been presented at national and international meetings. In literature we can find more than 200 000 directly measured CO2 data since 1800 from which I have estimated the annual CO2 background averages since 1826 to 1960, the end of the measurements by chemical methods. IPCC prefers ice core

reconstructions. This new data set reveals remarkable coherence with other geophysical timeseries. Please feel free to check data, methods, stations and historical literature. Comments are welcome.

<mime-attachment.jpeg>

**Fig. 1** Atmospheric CO2 background level 1826 – 1960. CO2 MBL estimation 1826- 1960 from directly measured data (Beck 2009); black line smoothed by a Savitzky-Golay filter, grey area= estimated error range).Savitzky Golay smoothing parameters : width of the moving window: 5, order: 2; passes: 3.  
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explanation of isotopes and such

Mr. Graham,

Let's go over this one point again. While I do not favor ethanol solutions to our problem, let me explain why that pound of CO2 from ethanol burning is not adding to the atmosphere. The point is that in producing the ethanol a pound of so of CO2 is extracted from the atmospheric reservoir. Whereas when you produce a pound of CO2 from coal it comes from the atmosphere as it was a hundred or more millions of years ago. This stuff has been buried all that time and out of reach. So the ethanol thing just removes a little and returns it to the atmosphere. It does not cause the concentration of CO2 to go up.

Andy is still waiting for your call. He promises to be nice.  
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Thank you for responding and giving me your best shot, even though it certainly does not come close to answering my simple question in the Austin American-Statesman, 12-23-09.

With all due respect, you are making political arguments instead of following the scientific method of proof. There is a total absence of reproducible test results of an hypothesis. The "moral choice" argument is the last refuge of losing debaters.

Assume, for the sake of your political arguments, that the current Democratic Party / Obama energy agenda has already succeeded — thereby destroying the oil industry in Texas and the rest of the United States, which includes the Texas A&M Petroleum Engineering Department — by replacing all liquid vehicle fuel in the United States with ethanol, there would be about a pound **more** of carbon dioxide emitted into the atmosphere for every gallon of gasoline that

the ethanol replaces. [The Wall Street Journal, 10-8-09, p. A16, "New CO2 Rules Will Have Many Strange Consequences."] Thus, the current Democratic Party / Obama energy agenda will cause **more**, not less, carbon dioxide emissions into the atmosphere.

Does it not seem strange to you that so-called "climate scientists" who allegedly want to decrease carbon dioxide emissions into the atmosphere are, in fact, advocating an agenda which **increases** carbon dioxide emissions into the atmosphere? It seems quite insane to me, but that's just my opinion. Because this expensive insanity is paid for by taxpayers, it also seems quite un-American to me, but, again, that's just my opinion.

Obviously, your particular "climate science community" — which does not include Lindzen, Singer, Michaels, Christy or any of the 9,000 Ph.D.s signing the Oregon Institute of Science and Medicine petition project — cannot answer my simple question.

Again, thank you for responding, which is something that Secretary Steven Chu and Science Czar John Holdren did not do.

Seldon B. Graham, Jr.

On Jan 6, 2010, at 11:42 AM, Gerald North wrote:

Hi Mr. Graham,

One last time. From your letter to the editor.

The question for scientists is whether CO2 increases cause a global warming and if so how much. The climate science community has settled on the answer that it does cause warming and by a range of from about 1.5 C to 4.5 C for CO2 doubling. Is this bad? Well it is if the top of the range is true, not so bad if the bottom holds. If the average over the range happens, there will be winners and losers. Anyone deciding on how to handle this will be making choices that affect people differently. These last are not scientific questions. They are moral choices. My opinion on the subject is no better than anyone else's since how do we really decide on one person's loss over another's gain?

But if you want my opinion it is that the likelihood of serious negative consequences for most humans is large enough that perhaps we should take some precautionary measures seriously. For example, conservation, cutting on imported energy sources that could compromise our national security to name a few. Since at least some of these measures are likely to be adopted, why not get the jump on our foreign competitors and move on some of the technologies that have been discussed. Texas is likely to be a big winner if we do, since we are loaded with opportunities here (wind, sun, etc).

In another decade of research we will have squared away a lot of our uncertainties about forced climate change. As this approaches we can be thinking about what to do if the warming does indeed appear to be caused by humans and to what extent things are changing as result.

I hope this answers your question. If you have further questions I suggest that you phone Professor Andrew Dessler. He has volunteered to continue the conversation via phone: (979)

862-1427.

Jerry North

On Jan 6, 2010, at 9:58 AM, Seldon Graham wrote:

Dr. North:

Thank you for your response.

Yes, I am really seeking a scientific answer to my question. No, the answer is not perfectly obvious to me or, for that matter, to the public. What is that perfectly obvious answer?

Seldon B. Graham, Jr.

On Jan 5, 2010, at 1:02 PM, Gerald North wrote:

Dear Mr. Graham,

Thanks for your hard copy letter, but as I said in my email to Charles, I am not really sure you are seeking an answer, especially since it is perfectly obvious.

Sincerely,  
Jerry

On Jan 5, 2010, at 11:29 AM, Seldon Graham wrote:

A simple scientific answer will perfectly satisfy "this guy." But, no scientist has yet been able to answer my question.

No *ad hominem* attacks have been made by me. I have just asked a simple question which no scientist seems able to answer.

Seldon B. Graham, Jr.  
"This guy"

On Jan 2, 2010, at 12:16 PM, Gerald North wrote:

Hi Charles,

You will never satisfy this guy. He will tie you in knots and never change. I received many hostile emails (one saying he would contact the Texas Attorney General to have me fired) after my interview in Andrew Freedman's blog at the Washington Post. I simply ignore them.

Best,  
Jerry

**Gerald North** <[g-north@tamu.edu](mailto:g-north@tamu.edu)>

Sent by: Gerald North  
<

01/07/2010 12:55 PM

To Seldon Graham <

cc Charles Jackson <[charles@ig.utexas.edu](mailto:charles@ig.utexas.edu)>, Jay Banner <[banner@mail.utexas.edu](mailto:banner@mail.utexas.edu)>, Zong Liang  
Yang <[liang@mail.utexas.edu](mailto:liang@mail.utexas.edu)>, [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu), Jay Lehr <  
Steve Goreham < John Dunn < Harvey  
Sheldon < [adessler@tamu.edu](mailto:adessler@tamu.edu), [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu),  
[toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)

Subject Re: A simple question

Hinshaw & Culbertson LLP is an Illinois registered limited liability partnership that has elected to be governed by the Illinois Uniform Partnership Act (1997).

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**From:**  
**To:** [Gerald North](#)  
**Cc:** [adessler@tamu.edu](mailto:adessler@tamu.edu); [Jay Banner](#); [Charles Jackson](#); [Steve Goreham](#); [Gerald North](#); [Jay Lehr](#); [John Dunn](#); [katharine.hayhoe@ttu.edu](mailto:katharine.hayhoe@ttu.edu); [Zong Liang Yang](#); [Seldon Graham](#); [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu); [toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)  
**Subject:** Re: A simple question  
**Date:** Thursday, January 07, 2010 4:13:24 PM  
**Attachments:** [450\\_peer\\_reviewed\\_papers.pdf](#)  
[DrWmhapperTestimonyFeb2009.pdf](#)  
[real\\_climate\\_exposed.pdf](#)  
[SegalstadreResidenceTime.pdf](#)

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Sorry Dr. North, I presumed incorrectly you were into the physics of the questions. I appreciate your response. As to RealClimate and Dr. Beck, I only know that RealClimate is basically a site that has been supported and voiced the opinions of several of the very people who are implicated by the "Climategate" e-mails in causing inappropriate data manipulation, erasures or data and other seriously questionable attempts to influence what gets published. A friend of mine who is a physicist repeatedly cited that site, too. He and that site are thumping the IPCC book as gospel, when it is in my mind clearly not. RealClimate has gained what I think is unfounded trust among many scientists, but its faults are also now being noticed.

I will leave it to other scientists than Beck (who I am sure has critics, as do we all) to speak further, and otherwise wish you and all concerned the best. Although many have been in the best of faith, this issue has been overhyped, oversold, hijacked, and distorted for political ends; it needs a thorough investigation by a truly trustworthy panel of investigators. No state, especially Texas, should let the federal government get away with putting this chokehold on the American economy.

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**Gerald North** <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
Sent by: Gerald North <

01/07/2010 03:35 PM

To  
cc [adessler@tamu.edu](mailto:adessler@tamu.edu), [Jay Banner <banner@mail.utexas.edu>](mailto:Jay Banner <banner@mail.utexas.edu>),  
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Sorry, Mr. Sheldon,

I am not a biologist and I can only give answers for the elementary questions as one I provided to Mr. Graham. I wish I knew enough to go over the Key Finding you list. I do understand several of them and I cannot disagree with the ones I understand. In my opinion many of these are good. Again it is a question of who will be the winners and who will be the losers. Picking is not science.

Then you went to Beck. Since I never heard of him (hardly an insult), I plugged Beck and CO<sub>2</sub> into google and found myself at a 2007 post on RealClimate, a blog that I read only when someone sends me there (thanks, I guess).

<http://www.realclimate.org/index.php/archives/2007/05/beck-to-the-future/>

This looks like a pretty good explanation of Beck's work.

By the way, one of the world experts is in the Windy City at the U of C, David Archer. You might check his website for some of those 1000 year adjustment times. He is a formidable scientist.

Jerry

On Jan 7, 2010, at 1:55 PM,

wrote:

Dr. North, I have been trying to keep to a quiet back seat on this whole "simple question" business. So forgive me if my self-control has temporarily failed, and please allow me to throw another snowball from right field. (It's snowing darned hard in Chicago today).

First, I suppose (or at least have no immediate basis to disagree that) it is perfectly correct to say that carbon dioxide released by fossil fuel combustion is from deposits that would otherwise lay sequestered in the earth. First question, is that so bad? Before you respond, please consider the following observations of the Non-Governmental International Panel on Climate Change:

#### **Chapter 7 Key Findings**

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Dr. North:

Thank you for your response.

Yes, I am really seeking a scientific answer to my question. No, the answer is not perfectly obvious to me or, for that matter, to the public. What is that perfectly obvious answer?

Seldon B. Graham, Jr.

On Jan 5, 2010, at 1:02 PM, Gerald North wrote:

Dear Mr. Graham,

Thanks for your hard copy letter, but as I said in my email to Charles, I am not really sure you are seeking an answer, especially since it is perfectly obvious.

Sincerely,  
Jerry

On Jan 5, 2010, at 11:29 AM, Seldon Graham wrote:

A simple scientific answer will perfectly satisfy "this guy." But, no scientist has yet been able to answer my question.

No *ad hominem* attacks have been made by me. I have just asked a simple question which no scientist seems able to answer.

Seldon B. Graham, Jr.  
"This guy"

On Jan 2, 2010, at 12:16 PM, Gerald North wrote:

Hi Charles,

You will never satisfy this guy. He will tie you in knots and never change. I received many hostile emails (one saying he would contact the Texas Attorney General to have me fired) after my interview in Andrew Freedman's blog at the Washington Post. I simply ignore them.

Best,  
Jerry

Gerald North <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
Sent by: Gerald North  
<

01/07/2010 12:55 PM

To Seldon Graham <[g-north@tamu.edu](mailto:g-north@tamu.edu)>  
cc Charles Jackson <[charles@ig.utexas.edu](mailto:charles@ig.utexas.edu)>, Jay Banner <[banner@mail.utexas.edu](mailto:banner@mail.utexas.edu)>, Zong Liang Yang <[liang@mail.utexas.edu](mailto:liang@mail.utexas.edu)>, katharine.hayhoe@ttu.edu, Jay Lehr <[jlehr@ttu.edu](mailto:jlehr@ttu.edu)>, John Dunn <[jdunn@tamu.edu](mailto:jdunn@tamu.edu)>, Harvey Sheldon <[hsheldon@tamu.edu](mailto:hsheldon@tamu.edu)>, [adessler@tamu.edu](mailto:adessler@tamu.edu), [steve.holditch@pe.tamu.edu](mailto:steve.holditch@pe.tamu.edu), [toby.baker@governor.state.tx.us](mailto:toby.baker@governor.state.tx.us)

Subject Re: A simple question

Hinshaw & Culbertson LLP is an Illinois registered limited liability partnership that has elected to be governed by the Illinois Uniform Partnership Act (1997).

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# REAL CLIMATE EXPOSED! A COMPREHENSIVE REPORT ON THE 'REAL' REALCLIMATE.ORG

*by Marc Morano*



Science & Public Policy Institute  
"science-based policy for a better world"

SPPI BLOGWATCH SERIES ♦ July 31, 2009

## **CLIMATE CHANGE**

Statement of

William Happer  
Cyrus Fogg Brackett Professor of Physics  
Princeton University

Before the

U.S. Senate Environment and Public Works Committee  
Senator Barbara Boxer, Chair

February 25, 2009

Madam Chairman and members, thank you for the opportunity to appear before the Committee on Environment and Public Works to testify on Climate Change. My name is William Happer, and I am the Cyrus Fogg Bracket Professor of Physics at Princeton University. I am not a climatologist, but I don't think any of the other witnesses are either. I do work in the related field of atomic, molecular and optical physics. I have spent my professional life studying the interactions of visible and infrared radiation with

gases – one of the main physical phenomena behind the greenhouse effect. I have published over 200 papers in peer reviewed scientific journals. I am a member of a number of professional organizations, including the American Physical Society and the National Academy of Sciences. I have done extensive consulting work for the US Government and Industry. I also served as the Director of Energy Research at the Department of Energy (DOE) from 1990 to 1993, where I supervised all of DOE's work on climate change. I have come here today as a concerned citizen to express my personal views, and those of many like me, about US climate-change policy. These are not official views of my main employer, Princeton University, nor of any other organization with which I am associated.

Let me state clearly where I probably agree with the other witnesses. We have been in a period of global warming over the past 200 years, but there have been several periods, like the last ten years, when the warming has ceased, and there have even been periods of substantial cooling, as from 1940 to 1970. Atmospheric concentrations of carbon dioxide (CO<sub>2</sub>) have increased from about 280 to 380 parts per million over past 100 years. The combustion of fossil fuels, coal, oil and natural gas, has contributed to the increase of CO<sub>2</sub> in the atmosphere. And finally, increasing concentrations of CO<sub>2</sub> in the atmosphere will cause the earth's surface to warm. The key question is: will the net effect of the warming, and any other effects of the CO<sub>2</sub>, be good or bad for humanity?

I believe that the increase of CO<sub>2</sub> is not a cause for alarm and will be good for mankind. I predict that future historians will look back on this period much as we now view the period just before the passage of the 18<sup>th</sup> Amendment to the US Constitution to prohibit "the manufacturing, sale or transportation of intoxicating liquors." At the time, the 18<sup>th</sup> amendment seemed to be exactly the right thing to do – who wanted to be in league with demon rum? It was the 1917 version of saving the planet. More than half the states enacted prohibition laws before the 18<sup>th</sup> amendment was ratified. Only one state, Rhode Island, voted against the 18<sup>th</sup> amendment. Two states, Illinois and Indiana, never got around to voting and all the rest voted for it. There were many thoughtful people, including a majority of Rhode Islanders, who thought that prohibition might do more harm than good. But they were completely outmatched by the temperance

movement, whose motives and methods had much in common with the movement to stop climate change. Deeply sincere people thought they were saving humanity from the evils of alcohol, just as many people now sincerely think they are saving humanity from the evils of CO<sub>2</sub>. Prohibition was a mistake, and our country has probably still not fully recovered from the damage it did. Institutions like organized crime got their start in that era. Drastic limitations on CO<sub>2</sub> are likely to damage our country in analogous ways.

But what about the frightening consequences of increasing levels of CO<sub>2</sub> that we keep hearing about? In a word, they are wildly exaggerated, just as the purported benefits of prohibition were wildly exaggerated. Let me turn now to the science and try to explain why I and many scientists like me are not alarmed by increasing levels of CO<sub>2</sub>.

The earth's climate really is strongly affected by the greenhouse effect, although the physics is not the same as that which makes real, glassed-in greenhouses work. Without greenhouse warming, the earth would be much too cold to sustain its current abundance of life. However, at least 90% of greenhouse warming is due to water vapor and clouds. Carbon dioxide is a bit player. There is little argument in the scientific community that a direct effect of doubling the CO<sub>2</sub> concentration will be a small increase of the earth's temperature -- on the order of one degree. Additional increments of CO<sub>2</sub> will cause relatively less direct warming because we already have so much CO<sub>2</sub> in the atmosphere that it has blocked most of the infrared radiation that it can. It is like putting an additional ski hat on your head when you already have a nice warm one below it, but you are only wearing a windbreaker. To really get warmer, you need to add a warmer jacket. The IPCC thinks that this extra jacket is water vapor and clouds.

Since most of the greenhouse effect for the earth is due to water vapor and clouds, added CO<sub>2</sub> must substantially increase water's contribution to lead to the frightening scenarios that are bandied about. The buzz word here is that there is "positive feedback." With each passing year, experimental observations further undermine the claim of a large positive feedback from water. In fact, observations suggest that the feedback is close to zero and may even be negative. That is, water vapor and clouds may actually diminish the already small global warming expected from CO<sub>2</sub>, not amplify it. The evidence here comes from satellite measurements of infrared

radiation escaping from the earth into outer space, from measurements of sunlight reflected from clouds and from measurements of the temperature the earth's surface or of the troposphere, the roughly 10 km thick layer of the atmosphere above the earth's surface that is filled with churning air and clouds, heated from below at the earth's surface, and cooled at the top by radiation into space.

But the climate is warming and CO<sub>2</sub> is increasing. Doesn't this prove that CO<sub>2</sub> is causing global warming through the greenhouse effect? No, the current warming period began about 1800 at the end of the little ice age, long before there was an appreciable increase of CO<sub>2</sub>. There have been similar and even larger warmings several times in the 10,000 years since the end of the last ice age. These earlier warmings clearly had nothing to do with the combustion of fossil fuels. The current warming also seems to be due mostly to natural causes, not to increasing levels of carbon dioxide. Over the past ten years there has been no global warming, and in fact a slight cooling. This is not at all what was predicted by the IPCC models.

The climate has changed many times in the past with no help by mankind. Recall that the Romans grew grapes in Britain around the year 100, and Viking settlers prospered on small farms in Greenland for several centuries during the Medieval Climate Optimum around 1100. People have had an urge to control the climate throughout history so I suppose it is no surprise that we are at it again today. For example, in June of 1644, the Bishop of Geneva led a flock of believers to the face of a glacier that was advancing "by over a musket shot" every day. The glacier would soon destroy a village. The Bishop and his flock prayed over the glacier, and it is said to have stopped. The poor Vikings had long since abandoned Greenland where the advancing glaciers and cooling climate proved much less susceptible to prayer. Sometimes the obsession for control of the climate got a bit out of hand, as in the Aztec state, where the local scientific/religious establishment of the year 1500 had long since announced that the debate was over and that at least 20,000 human sacrifices a year were needed to keep the sun moving, the rain falling, and to stop climate change. The widespread dissatisfaction of the people who were unfortunate enough to be the source of these sacrifices played an important part in the success of the Spanish conquest of Mexico.

The existence of climate variability in the past has long been an embarrassment to those who claim that all climate change is due to man and that man can control it. When I was a schoolboy, my textbooks on earth science showed a prominent “medieval warm period” at the time the Vikings settled Greenland, followed by a vicious “little ice age” that drove them out. So I was very surprised when I first saw the celebrated “hockey stick curve,” in the Third Assessment Report of the IPCC. I could hardly believe my eyes. Both the little ice age and the Medieval Warm Period were gone, and the newly revised temperature of the world since the year 1000 had suddenly become absolutely flat until the last hundred years when it shot up like the blade on a hockey stick. This was far from an obscure detail, and the hockey stick was trumpeted around the world as evidence that the end was near. We now know that the hockey stick has nothing to do with reality but was the result of incorrect handling of proxy temperature records and incorrect statistical analysis. There really was a little ice age and there really was a medieval warm period that was as warm or warmer than today. I bring up the hockey stick as a particularly clear example that the IPCC summaries for policy makers are not dispassionate statements of the facts of climate change. It is a shame, because many of the IPCC chapters are quite good. The whole hockey-stick episode reminds me of the motto of Orwell’s Ministry of Information in the novel “1984:” “He who controls the present, controls the past. He who controls the past, controls the future.” The IPCC has made no serious attempt to model the natural variations of the earth’s temperature in the past. Whatever caused these large past variations, it was not due to people burning coal and oil. If you can’t model the past, where you know the answer pretty well, how can you model the future?

Many of us are aware that we are living in an ice age, where we have hundred-thousand-year intervals of big continental glaciers that cover much of the land area of the northern hemisphere, interspersed with relative short interglacial intervals like the one we are living in now. By looking at ice cores from the Greenland and Antarctic ice sheets, one can estimate past temperatures and atmospheric concentrations of CO<sub>2</sub>. Al Gore likes to display graphs of temperature and CO<sub>2</sub> concentrations over the past million years or so, showing that when CO<sub>2</sub> rises, the temperature also rises. Doesn’t

this prove that the temperature is driven by CO<sub>2</sub>? Absolutely not! If you look carefully at these records, you find that first the temperature goes up, and then the CO<sub>2</sub> concentration of the atmosphere goes up. There is a delay between a temperature increase and a CO<sub>2</sub> increase of about 800 years. This casts serious doubt on CO<sub>2</sub> as a climate driver because of the fundamental concept of causality. A cause must precede its effect. For example, I hear my furnace go on in the morning about six o'clock, and by about 7 o'clock, I notice that my house is now so warm that I have too many covers on my bed. It is time to get up. It would never occur to me to assume that the furnace started burning gas at 6 o'clock because the house got warm at 7 o'clock. Sure, temperature and gas burning are correlated, just like temperature and atmospheric levels of CO<sub>2</sub>. But the thing that changes first is the cause. In the case of the ice cores, the cause of increased CO<sub>2</sub> is almost certainly the warming of the oceans. The oceans release dissolved CO<sub>2</sub> when they warm up, just like a glass of beer rapidly goes flat in a warm room. If not CO<sub>2</sub>, then what really causes the warming at the end of the cold periods of ice ages? A great question and one of the reasons I strongly support research in climate.

I keep hearing about the "pollutant CO<sub>2</sub>," or about "poisoning the atmosphere" with CO<sub>2</sub>, or about minimizing our "carbon footprint." This brings to mind another Orwellian pronouncement that is worth pondering: "But if thought corrupts language, language can also corrupt thought." CO<sub>2</sub> is not a pollutant and it is not a poison and we should not corrupt the English language by depriving "pollutant" and "poison" of their original meaning. Our exhaled breath contains about 4% CO<sub>2</sub>. That is 40,000 parts per million, or about 100 times the current atmospheric concentration. CO<sub>2</sub> is absolutely essential for life on earth. Commercial greenhouse operators often use CO<sub>2</sub> as a fertilizer to improve the health and growth rate of their plants. Plants, and our own primate ancestors evolved when the levels of atmospheric CO<sub>2</sub> were about 1000 ppm, a level that we will probably not reach by burning fossil fuels, and far above our current level of about 380 ppm. We try to keep CO<sub>2</sub> levels in our US Navy submarines no higher than 8,000 parts per million, about 20 time current atmospheric levels. Few adverse effects are observed at even higher levels.

We are all aware that “the green revolution” has increased crop yields around the world. Part of this wonderful development is due to improved crop varieties, better use of mineral fertilizers, herbicides, etc. But no small part of the yield improvement has come from increased atmospheric levels of CO<sub>2</sub>. Plants photosynthesize more carbohydrates when they have more CO<sub>2</sub>. Plants are also more drought-tolerant with more CO<sub>2</sub>, because they need not “inhale” as much air to get the CO<sub>2</sub> needed for photosynthesis. At the same time, the plants need not “exhale” as much water vapor when they are using air enriched in CO<sub>2</sub>. Plants decrease the number of stomata or air pores on their leaf surfaces in response to increasing atmospheric levels of CO<sub>2</sub>. They are adapted to changing CO<sub>2</sub> levels and they prefer higher levels than those we have at present. If we really were to decrease our current level of CO<sub>2</sub> of around 400 ppm to the 270 ppm that prevailed a few hundred years ago, we would lose some of the benefits of the green revolution. Crop yields will continue to increase as CO<sub>2</sub> levels go up, since we are far from the optimum levels for plant growth. Commercial greenhouse operators are advised to add enough CO<sub>2</sub> to maintain about 1000 ppm around their plants. Indeed, economic studies like those of Dr. Robert Mendelsohn at Yale University project that moderate warming is an overall benefit to mankind because of higher agricultural yields and many other reasons.

I remember being forced to read Voltaire’s novel, *Candide*, when I was young. You recall that Dr. Pangloss repeatedly assured young Candide that he was living in “the best of all possible worlds,” presumably also with the best of all CO<sub>2</sub> concentrations. That we are (or were) living at the best of all CO<sub>2</sub> concentrations seems to be a tacit assumption of the IPCC executive summaries for policy makers. Enormous effort and imagination have gone into showing that increasing concentrations of CO<sub>2</sub> will be catastrophic, cities will be flooded by sea-level rises that are ten or more times bigger than even IPCC predicts, there will be mass extinctions of species, billions of people will die, tipping points will render the planet a desert. A few months ago I read that global warming will soon bring on a devastating epidemic of kidney stones. If you write down all the ills attributed to global warming you fill up a very thick book.

Much is made about tropical diseases like malaria and yellow fever devastating the populations of temperate climates because of the burning of fossil fuels and the subsequent warming of the earth. Many people who actually work with tropical diseases, notably Dr. Paul Reiter, a specialist on tropical diseases, have pointed out how silly all of this is. Perhaps I can add a few bits of history to illustrate this point. One of the first military expenditures of the Continental Congress in 1775 was \$300 to purchase quinine for the Continental Army and to mitigate the effects of malaria. The Continental Congress moved from the then Capital of the United States, Philadelphia, to my home town of Princeton, New Jersey, in the summer of 1783 for two reasons. The first was that the Congress had not yet paid many soldiers of the Revolutionary War their promised wages, and disgruntled veterans were wandering up and down the streets of Philadelphia. Secondly, there were outbreaks of malaria in cities as far north as Boston. The Congress knew you were less likely to catch malaria in Princeton than in Philadelphia. In 1793 there was not only malaria, but a horrendous outbreak of yellow fever in Philadelphia. Many thousands of people died in a city with a population of about 50,000. And I should point out that Philadelphia was a bit cooler then than now, since the little ice age was just coming to an end. Controlling tropical diseases and many other diseases has little to do with temperature, and everything to do with curtailing the factors that cause the spread – notably mosquitoes in the case of malaria and yellow fever.

Many of the frightening scenarios about global warming come from large computer calculations, “general circulation models,” that try to mimic the behavior of the earth’s climate as more CO<sub>2</sub> is added to the atmosphere. It is true that climate models use increasingly capable and increasingly expensive computers. But their predictions have not been very good. For example, none of them predicted the lack of warming that we have experienced during the past ten years. All the models assume the water feedback is positive, while satellite observations suggest that the feedback is zero or negative.

Modelers have been wrong before. One of the most famous modeling disputes involved the physicist William Thompson, later Lord Kelvin, and the naturalist Charles Darwin. Lord Kelvin was a great believer in models and differential equations. Charles

Darwin was not particularly facile with mathematics, but he took observations very seriously. For evolution to produce the variety of living and fossil species that Darwin had observed, the earth needed to have spent hundreds of millions of years with conditions not very different from now. With his mathematical models, Kelvin rather pompously demonstrated that the earth must have been a hellish ball of molten rock only a few tens of millions of years ago, and that the sun could not have been shining for more than about 30 million years. Kelvin was actually modeling what he thought was global and solar cooling. I am sorry to say that a majority of his fellow physicists supported Kelvin. Poor Darwin removed any reference to the age of the earth in later editions of the "Origin of the Species." But Darwin was right the first time, and Kelvin was wrong. Kelvin thought he knew everything but he did not know about the atomic nucleus, radioactivity and nuclear reactions, all of which invalidated his elegant modeling calculations.

This brings up the frequent assertion that there is a consensus behind the idea that there is an impending disaster from climate change, and that it may already be too late to avert this catastrophe, even if we stop burning fossil fuels now. We are told that only a few flat-earthers still have any doubt about the calamitous effects of continued CO2 emissions. There are a number of answers to this assertion.

First, what is correct in science is not determined by consensus but by experiment and observations. Historically, the consensus is often wrong, and I just mentioned the incorrect consensus of modelers about the age of the earth and the sun. During the yellow fever epidemic of 1793 in Philadelphia the medical consensus was that you could cure almost anything by bleeding the patient. Benjamin Rush, George Washington's Surgeon General during the War of Independence, and a brave man, stayed in Philadelphia throughout the yellow fever epidemic. He worked tirelessly to save the stricken by bleeding them, the consensus treatment of the day. A few cautious observers noticed that you were more likely to survive the yellow fever without the services of the great man. But Dr. Rush had plenty of high level-friends and he was backed up by the self-evident consensus, so he went ahead with his ministrations. In summary, a consensus is often wrong.

Secondly, I do not think there is a consensus about an impending climate crisis. I personally certainly don't believe we are facing a crisis unless we create one for ourselves, as Benjamin Rush did by bleeding his patients. Many others, wiser than I am, share my view. The number of those with the courage to speak out is growing. There may be an illusion of consensus. Like the temperance movement one hundred years ago the climate-catastrophe movement has enlisted the mass media, the leadership of scientific societies, the trustees of charitable foundations, and many other influential people to their cause. Just as editorials used to fulminate about the slippery path to hell behind the tavern door, hysterical op-ed's lecture us today about the impending end of the planet and the need to stop climate change with bold political action. Many distinguished scientific journals now have editors who further the agenda of climate-change alarmism. Research papers with scientific findings contrary to the dogma of climate calamity are rejected by reviewers, many of whom fear that their research funding will be cut if any doubt is cast on the coming climate catastrophe. Speaking of the Romans, then invading Scotland in the year 83, the great Scottish chieftain Calgacus is quoted as saying "They make a desert and call it peace." If you have the power to stifle dissent, you can indeed create the illusion of peace or consensus. The Romans have made impressive inroads into climate science. Certainly, it is a bit unnerving to read statements of Dr. James Hansen in the Congressional Record that climate skeptics are guilty of "high crimes against humanity and nature."

Even elementary school teachers and writers of children's books are enlisted to terrify our children and to promote the idea of impending climate doom. Having observed the education of many children, including my own, I am not sure how effective the effort will be. Many children seem to do just the opposite of what they are taught. Nevertheless, children should not be force-fed propaganda, masquerading as science. Many of you may know that in 2007 a British Court ruled that if Al Gore's book, "An Inconvenient Truth," was used in public schools, the children had to be told of eleven particularly troubling inaccuracies. You can easily find a list of the inaccuracies on the internet, but I will mention one. The court ruled that it was not possible to attribute hurricane Katrina to CO<sub>2</sub>. Indeed, had we taken a few of the many billions of dollars we have been spending on climate change research and propaganda and fixed the dykes

and pumps around the New Orleans, most of the damage from Hurricane Katrina could have been avoided.

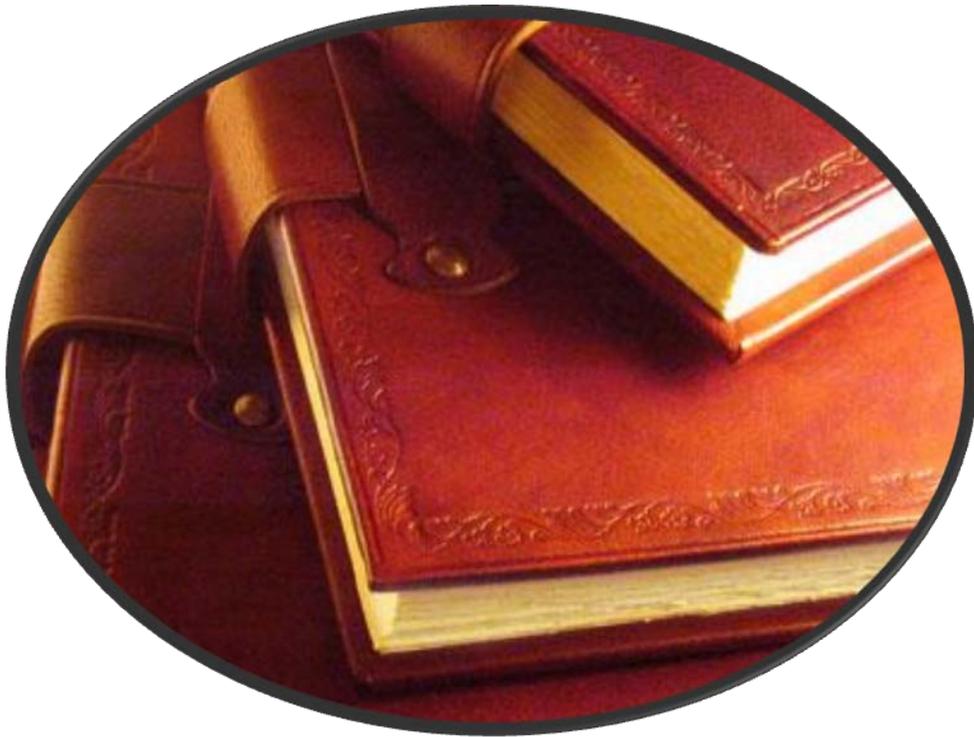
The sea level is indeed rising, just as it has for the past 20,000 years since the end of the last ice age. Fairly accurate measurements of sea level have been available since about 1800. These measurements show no sign of any acceleration. The rising sea level can be a serious local problem for heavily-populated, low-lying areas like New Orleans, where land subsidence compounds the problem. But to think that limiting CO<sub>2</sub> emissions will stop sea level rise is a dangerous illusion. It is also possible that the warming seas around Antarctica will cause more snowfall over the continent and will counteract the sea-level rise. In any case, the rising sea level is a problem that needs quick local action for locations like New Orleans rather than slow action globally.

In closing, let me say again that we should provide adequate support to the many brilliant scientists, some at my own institution of Princeton University, who are trying to better understand the earth's climate, now, in the past, and what it may be in the future. I regret that the climate-change issue has become confused with serious problems like secure energy supplies, protecting our environment, and figuring out where future generations will get energy supplies after we have burned all the fossil fuel we can find. We should not confuse these laudable goals with hysterics about carbon footprints. For example, when weighing pluses and minuses of the continued or increased use of coal, the negative issue should not be increased atmospheric CO<sub>2</sub>, which is probably good for mankind. We should focus on real issues like damage to the land and waterways by strip mining, inadequate remediation, hazards to miners, the release of real pollutants and poisons like mercury, other heavy metals, organic carcinogens, etc. Life is about making decisions and decisions are about trade-offs. The Congress can choose to promote investment in technology that addresses real problems and scientific research that will let us cope with real problems more efficiently. Or they can act on unreasonable fears and suppress energy use, economic growth and the benefits that come from the creation of national wealth.



# 450 PEER-REVIEWED PAPERS SUPPORTING SKEPTICISM OF AGW-CAUSED GLOBAL WARMING

*by Anthony Watts*



SPPI REPRINT SERIES ♦ November 16, 2009

**From:**  
**To:** [adessler@tamu.edu](mailto:adessler@tamu.edu)  
**Subject:** catching up with my Newsmax story including you  
**Date:** Thursday, January 07, 2010 11:16:25 AM  
**Attachments:** [COOLING-Dessler-NEWSMAX.doc](#)

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Prof. Dessler:

A few weeks ago I interviewed you for a story about climate change for Newsmax magazine. At the time I also indicated that I would like you to "author" a short (300 words) take, akin to a blog post, on some aspect of the issue.

I decided to set up a point-counterpoint between you and Richard Lindzen on feedback. To that end, I have put together the attached as a draft of "your" proposed monograph, borrowing from my interview with you as well as the blog entry that you posted in response to Roger Pielke Sr. recently.

Would you mind looking this over quickly and letting me know if it's OK with you or suggesting changes? Sorry to press you on time but because of how dynamic this issue has been over the last few weeks, the magazine has been shifting its approach to and packaging of the story in some regards.

Once I get your "approved" draft back -- by tomorrow possible? -- I'll send you Prof. Lindzen's approved counterpoint draft.

I know we're not diving too deeply into the details of the science here, because it's a lay audience. But I hope you agree that you make your point well in this piece.

Thanks again.

Dale Buss  
for Newsmax

**By Andrew Dessler**

**From:** [Matt Lloyd](#)  
**To:** [Andrew Dessler](#)  
**Subject:** the reviews in full ...  
**Date:** Thursday, January 07, 2010 10:45:08 AM

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## Reviewer A

I think the proposed textbook will be an extremely valuable resource, and it will find a ready market.

I do not currently teach a freshman level climate change course, however I do teach a "Oceans and Atmospheres" course which I have been considering replacing with a "Global Warming" course. The existing Oceans and Atmospheres course is for newcomers to the subject, science and non-science majors, and includes freshman through to senior undergraduates. We currently have an enrollment of around 60, but changing to Global Warming would I suspect increase this to 100+.

I have actually been looking for a book for a freshman level global warming course, and was very surprised that there are no such textbooks. There is currently a large number of introductory / freshman-level text books on meteorology (e.g. Ahrens "Meteorology Today"), oceanography, or earth science, but I am not aware of the same type of book focused on modern climate change. As Andy Dessler comments there are a few books that consider climate change but their focus is different (more paleoclimate, and no discussion of mitigation / adaptation). So I think there is a pressing need for the book proposed by Andy.

I would almost certainly use Andy's book for my proposed class. His previous books are well written, and I use the Dessler and Parson "The Science and Politics of Global Climate Change: a Guide to the Debate" book for an upper level undergraduate course, and have used his Stratospheric Ozone book in graduate course on ozone. Depending on exactly how much math / science is in the new book I could also use it for my upper level course (which includes a lot of non-science majors).

The proposed outline / material for the textbook looks fine, and would fit into a one semester course. I think the science / policy balance is good, and he is proposing to cover the main issues.

I have a couple of minor comments.

Title: How about "Modern Climate Change"? The use of "Human-induced" could give the incorrect impression that natural changes (e.g. solar variations) are not considered, and that only human-induced changes are included.

Topics: There does not look to be much discussion of the role of the atmospheric or oceanic circulation, and spatial/temporal variations due to this (e.g., regions climate variations). Some discussion of this will be needed for understanding past/current variations, and also impacts.

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## Reviewer B

### Your course details

Please give brief details of the course for which the book could potentially be recommended:

1) Course title:

Two potential courses: Climate Change, Energy and Development

Duration: Offered every semester

Degree Programme: Masters in Environmental Science and Policy

Or my undergraduate course “Sustainability Science: Environment, Society and Technology” – offered every spring – 30 undergraduate students.

2) What is the level of the course? Are the students freshman, sophomore, junior, senior, graduate level? Are they newcomers to the subject or more advanced? Are they science majors or non-majors, or both? Approximately how many students enrol in the class on average each semester and year?

The students in the first course are graduate students and a few advanced undergraduates. They have some background in the subject, but very diverse backgrounds so nothing is assumed. Non-science majors mostly, but some have extensive science background. In my class I have about 20 students per semester.

In the undergraduate class the students are primarily environmental science majors, but it is among their first science courses so some have little science background.

3) Do you adopt a textbook on the course? Which one(s)? How long has the book been used on this course? Are there other books that you have used in the past? Is a textbook essential reading or recommended reading for the course? Do all or most students purchase the book?

I have used the Dessler and Parson book, but I stopped using that two years ago because it is outdated and it does not have enough science. Mostly I put together my own resources and references to make my own personalized course reader.

4) What are the strengths and weaknesses of the textbook you adopt? Are there any gaps in coverage? Are topics presented in the right order? Is the book well-structured? How well does the book meet your course needs? Is the level appropriate for your students? What do you think of the physical presentation and layout of the book? What do you think of the supplementary resources for the book (if there are any)?

#### **Review of the plan for the new textbook:**

5) What is your opinion of the author's plan for the new textbook? Is this a good fit for your course(s)? What additional features or changes would improve the book even further for your own course, either within the main body of the book, or with the supplementary material? Do you like the balance and coverage of science and policy issues? Would you use this book for your course, as it is outlined here? If not, why not?

The proposed new textbook could be very appropriate for a part of my graduate level course, but it could also be extremely helpful for my undergraduate course. If there was a book like this already on the market I would teach my undergrad class in a different way. The proposed balance between science and policy issues is effective... the proposed book is described as 70% science... which seems appropriate for the target audience of general education undergraduates.

19) Do you have any other comments or suggestions?

I really like the proposed book and wish it were available sooner rather than later. I think there definitely is a demand for this kind of book. I know the Houghton book quite well and have not been able to successfully use this one in the classroom because it is too qualitative.

I took a look through the three sample chapters and I am impressed. I think this is an important book project and I think there will definitely be a growing audience for a textbook like this.

A challenge will be to keep the book current. As things change (potentially rapidly) in the next few years, both in terms of science and policy but likely in terms of policy, some parts of the text could become outdated. But given the dominance of the basic science – which will not change – I am sure

that the author will be able to write a text whose relevance will be sustained for many years.

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**Reviewer C**

Matt,

I just went through Andy Dessler's book proposal. It makes sense. His key statement is:

*"The main difference is that Houghton's book is entirely qualitative. There is, as far as I can see, no math in the book. My proposed book has more quantitative physics in it, including simple equations and will require students use algebra to solve the problems at the end of the chapter."*

The old Turco book that I once used is terrible, Turco never updated it and even had the nerve to do a 2nd editions in which nothing was changed, even the typos!

I am a bit worried about the outline. Although we have a carbon cycle chapter there is no parallel chapter on atmospheric composition and chemistry. Aerosols and chemistry are very important in climate forcing, including the ice ages. Also Dessler knows about this - not sure why it is forgotten.

Also, I would rather see serious and parallel chapters on adaptation and mitigation, rather than the odd pair here (12 & 13). I still do not understand why Chapter 11? It does not fit. One problem is that the scenarios here are / will be out of date by the time this is used - the new RCPs will be the core of the AR5 and future climate runs, that is not to say that the SRES (which I cut my teeth on in 1998) will still not be referred to. I did not see any clear problem sets at the end of the three chapters - these are essential if this book is to be useful in the undergraduate/non-major curriculum. Another point is that the 14 chapters are obviously filled out to cover a semester course. There needs to be some more serious design as to the core 10-week and 14-week curriculum (the chapter on exponential growth seems to be a filler).

I do have a serious disagreement with Dessler's statement that the students want glossy color text books - but only at a price. Mine have often voted overwhelmingly for simple B&W texts because they came in under \$45 instead of at >\$100.

What is more surprising in Dessler's 'modern' approach is the complete lack of a web-based curriculum to accompany the text. I am in favor of maintaining paper text books, but there is a massive amount of climate material out there (free) that needs to be merged into the course. This is perhaps the most surprising gap here.

In summary, a text as described would be very useful, the need for simple problem sets cannot be underestimated, but the lecture notes and auxiliary material (web based) are essential. Hope this helps,

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**Reviewer D**

Dear Matt:

I responded to your questionnaire below. I thought it might be useful for me to make a few general comments before turning to the questionnaire.

First, as you know I very much like the Dessler and Parsons text and am using it again with great success this term in my 200-level Introduction to American Public Policy course. It is a perfect fit for the course, which most years focuses on climate change as our principal public policy case study. The

book is clearly written and the authors explain and integrate the science and policy questions very well. The students in this course are mostly sophomores, but they find the book highly informative and engaging. I will use the new edition next year.

That said, I think the new Dessler book contains too much science for my purposes. In my course I want the students to become familiar with the basics of climate science and change, but more importantly, they need to understand science within the context of the policy debate. The way in which Dessler and Parsons analyze the debate itself as a matter of policy is what makes the book so attractive to me. Consequently, of the new Dessler chapters you sent to me, 3 and 4 are too technical since I am not a scientist. On the other hand, Ch. 8 would work very well. The new book is not, however, a substitute for the Dessler and Parsons book, which is so clearly focused on the policy debate about climate change.

It occurs to me that my colleagues in the interdisciplinary Environmental Science Program might be interested in the new text. XXX chairs the program and you can certainly tell him I suggested you get in touch. Incidentally, he also uses the Dessler and Parsons text in his program's senior seminar.

Some of my students who concentrate in Environmental Policy also take that course and so read the book twice!

Finally, I do think the new book would be an excellent choice for general science courses aimed at non-majors. I have other colleagues in the sciences who could provide you with more information on that score.

Hope my comments are useful.

Best,  
XXX

Textbook Proposal Questionnaire

Your course details

Please give brief details of the course for which the book could potentially be recommended:

1) Course title: INTRODUCTION TO AMERICAN PUBLIC POLICY

Duration: FALL TERM

Degree Programme: B.A.

2) What is the level of the course? Are the students freshman, sophomore, junior, senior, graduate level? Are they newcomers to the subject or more advanced? Are they science majors or non-majors, or both? Approximately how many students enrol in the class on average each semester and year? THIS COURSE IS THE INTRODUCTORY COURSE FOR THE PUBLIC POLICY AND LAW MAJOR, AND MOST STUDENTS ARE SOPHOMORES WHO INTEND TO MAJOR. OCCASIONALLY A SCIENCE MAJOR ENROLLS. THE CLASS RANGES FROM 45-56 STUDENTS.

3) Do you adopt a textbook on the course? Which one(s)? How long has the book been used on this course? Are there other books that you have used in the past? Is a textbook essential reading or recommended reading for the course? Do all or most students purchase the book?

I ADOPT THE TEXT. I HAVE NOW USED THE DESSLER AND PARSONS TEXT TWICE, AND IT IS REQUIRED READING. I WILL USE THE NEW EDITION NEXT YEAR AND HAVE NOT USED OTHER TEXTS. STUDENTS DO PURCHASE THE BOOK.

4) What are the strengths and weaknesses of the textbook you adopt? Are there any gaps in

coverage? Are topics presented in the right order? Is the book well-structured? How well does the book meet your course needs? Is the level appropriate for your students? What do you think of the physical presentation and layout of the book? What do you think of the supplementary resources for the book (if there are any)?

I WOULD NOT BE LIKELY TO ADOPT THE NEW TEXT BY DESSLER. THE DESSLER AND PARSONS TEXT IS A PERFECT FIT FOR MY COURSE BECAUSE IT TREATS CLIMATE CHANGE WITHIN THE CONTEXT OF THE LARGER PUBLIC POLICY DEBATE. THE NEW DESSLER TEXT WOULD REQUIRE MORE SCIENTIFIC BACKGROUND THAN MOST OF MY STUDENTS HAVE, AND I AM NOT AN EXPERT IN THE SCIENCE MYSELF.

Review of the plan for the new textbook:

5) What is your opinion of the author's plan for the new textbook? Is this a good fit for your course(s)? What additional features or changes would improve the book even further for your own course, either within the main body of the book, or with the supplementary material? Do you like the balance and coverage of science and policy issues? Would you use this book for your course, as it is outlined here? If not, why not?

THE TEXT PLAN LOOKS VERY GOOD FOR USE IN A SCIENCE COURSE THAT ALSO TAKES UP SOME POLICY ISSUES. SINCE I DO NOT TEACH SCIENCE COURSES, I CANNOT COMMENT ON THE VERACITY OF THE SCIENTIFIC MATERIAL. THE EXPLANATIONS APPEAR TO BE CLEAR, BUT THE MATERIAL IS TOO TECHNICAL FOR MY CLASSES WHICH ADDRESS CLIMATE CHANGE PRIMARILY FROM A POLICY PERSPECTIVE. THE BOOK IS TOO TECHNICAL FOR MY PURPOSES.

19) Do you have any other comments or suggestions? I WOULD CONTACT FACULTY WHO EMPHASIZE SCIENCE OVER POLICY IN THE TEACHING OF THIS MATERIAL.

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**Reviewer E**

Overall conclusion : Publish after considering the points raised by the reviewers.

Some preliminary questions that the publisher should ask the author:

1. What will be estimated length of the book?
2. Why not open up the course to graduate students and to social science, engineering and health physics students? At my university, we tried this, and it was highly successful. Of course, the term papers and class presentations of graduate students have to be chosen (and graded) differently, with emphasis on the discipline of the student. For example, a graduate student in economics would have to select a term-paper topic straddling both climate change and economics.

Comments on specific chapters

Chapter 1:

Make this chapter really interesting. And ask a couple of potential students to read the text to confirm your opinion.

Define climate warming.

Your line 1 is not strictly correct. What about the Little Ice Age between approximately 1560 and 1850?

The question, "Why should you believe this book?" should be asked again in the last chapter. A good reference for this chapter, and/or for chapter 2 is in Wikipedia, "Global Warming. Frequently Asked Questions. Prepared by NOAA National Climate Data Center".

Chapter 2:

Pretty standard stuff in this chapter, and I have only one comment. Check the following reference, Peterson, T.C. et al (2009) State of the Climate in 2008. Bull. Amer. Meteorol. Soc. Special Suppl. 90, There is a short article near the beginning of this issue noting that global climate warming ceased about 10 years ago, and speculating on the causes. But hold off a discussion of Climategate until Chapter 7 or 10.

Chapters 3, 4:

See comments by my colleague, below.

Chapter 5:

No comments. You have the right grouping of topics for this chapter .

Chapter 6:

Mention that water vapour is a greenhouse gas. Why isn't it discussed in most textbooks?

Chapter 7:

Perhaps combine Chapters 7 and 2. Maybe add a discussion of climategate here. Otherwise OK.

Chapter 8 :

See comments by other reviewer.

Chapter 9:

This looks like a good outline.

Chapter 10:

A good outline of topics. I think that the turning point was a little earlier than 1988. It was the discovery of the Antarctic Ozone Hole by the British and subsequent publication of the results in Nature. Also, be sure to define "dangerous" and to discuss the Copenhagen Summit taking place this December.

Chapter 11:

OK

Chapters 12 and 13

You might consider combining Chapters 12 and 13, or moving the subsection on Mitigation in Chapter 12 to Chapter 13.

Chapter 14:

You should add a discussion of the precautionary principle, the no-regrets principle and the keep-options-open principle.

Other comments:

1. Add glossary and list of acronyms.
2. Add a chapter on the world oceans to include acidification, the North Atlantic Thermohaline Circulation, sea level rise and melting of the Arctic Ocean .
3. You will find most of the references that you need in the IPCC 2007 overviews.

Comments from colleague:

Chapter 3:

Figure numbers are inconsistent.

I suggest the author use the "standard" variable notations. For example,  $e_{2.1}$  expresses heat capacity as  $E=CT$ . It would be better to express it as  $Q=CT$ . It would be better to stick to accepted notations

used in physics, in case the reader would like to learn more about radiation from a physics book.

Equation numbers are inconsistent.

Vertical axis label is missing in Fig (f2.6a).

Regarding e2.3 ..... The equation needs to be identified as the Stefan-Boltzmann equation.

Example regarding the basket ball .... The author needs to discuss somewhere in the chapter, if not in the context of this example, about grey-body radiation. A basket ball is not a black body. And the earth is a grey body.

Page 15: The statement “understanding the earth’s climate reduces to understanding the energy balance of the earth.” This is too simplistic and misleading within the context of this chapter’s discussion. One needs to make sure that the reader understands also the essential role of the circulation dynamics of the atmosphere in “understanding the earth’s climate.” I understand where the author is coming from, but I doubt the reader will appreciate fully, or very likely misses the importance of the phrase “reduces to.”

When I teach climate change to a group of undergraduate students in environmental science with almost nil background in physical sciences, I make sure that they understand the very important role of the hydrological feedback. When one talks about the “greenhouse gas” effect that keeps the surface of the earth relatively warm, one simply cannot ignore the huge importance of water vapour in the atmosphere. I have noted that the students I come across believe that CO<sub>2</sub> is the greenhouse gas and it is the main gas that contributes to the global warming. This of course is not true.

#### Chapter 4:

There is no “theory of climate.”

Page 2: Need to define S as designating solar constant. The way it is now, “S is 1360 W/m<sup>2</sup> without defining what S is.

e3.1a .... Should use “ $\alpha$ ” to designate albedo, as is done typically in many of the books on meteorology, rather than using “a” for it has been used to designate area.

Page 9 ... There is a mistake.  $P/a = ST^4$  should read  $P/a = \sigma T^4$ .

Figure numbers should be changed.

Page 12 .... “downward emission of layer n ... n-2” should read “ ... layer 1 ... 3.” It seems to me that the author is discussing radiative balance from layer to layer, starting with layer 1, then to layer 2 and then to 3, establishing a pattern.

Page 13 ... need to label the equation (e4.4 ?)

Page 14 ... this equation is supposed to be labelled e4.5 ?

#### Chapter 8:

This chapter is quite useful. The last paragraph in this chapter is, to use a colloquial language, good stuff.