

THE CLIMATE CHANGE DEBATE AS OF EARLY JULY, 2004

Attached below are three inter-related documents:

- A. A transcription of a remarkable press conference held recently at the end of a climate-change meeting in Moscow, by Andre Illarionov and Yuri Israel.
- B. A view of the same conference from the other side of the fence, in the form of a letter from Dr. Peter Cox of the British Meteorological Office, who participated in the conference.
- C. A copy of a recent letter that I submitted to Nature on the issue of the Mann et al. hockey stick and climate change.

Some comments:

1. Yuri Izrael, who intervenes a couple of times during the interview in full support of Illarionov, is one of the three IPCC Vice Chairs.
2. On 18 May 2001 "Science" (journal of the American Association for the Advancement of Science) published a statement by 17 national scientific academies, including the Australian Academy of Science, which stated that the ratification of the Kyoto Protocol "represents a small but essential first step toward stabilizing atmospheric concentrations of greenhouse gases".
3. Sir Robert May, President of the Royal Society (who was King's predecessor as Chief Scientific Adviser to the UK Government) told "Science" in a news report in the same issue that the Royal Society had organised the statement and that it was "partly provoked by Bush's recent rejection of the Kyoto treaty, along with resistance to Kyoto terms from countries such as Australia". The then-chair of the IPCC, Bob Watson, subsequently used the fact that the Australian Academy of Science had signed up to the joint academies' statement in evidence to the Senate Committee on Treaties Inquiry on the Kyoto Protocol.
4. This episode, taken with the details set out below, shows that British institutional science now basically operates as an arm of British government policy. Many Academies in the colonies and ex-colonies were part of the gang of 16 that said yes to the Royal Society - the AAS, the Royal Society of Canada, Indian National Science Academy, Academy of Sciences Malaysia, and the Academy Council of the Royal Society of New Zealand.

One may well wonder how the Australian Academy of Science and the New Zealand Royal Society got themselves involved in this sorry tale.

5. Peter Cox's finely turned letter is almost a classic of British bureaucratic craftsmanship. Yet all the major points made by Illarionov remain valid. And more - they RESONATE. Cox's letter is itself as much political as was Illarionov's outburst. Some of the statements in it are true (i.e. that all scientists will agree with them; and the most obvious response to

those is "so what"). Others (such as 7, 8 and especially 9) are, to say the least, controversial, even when written in such apparently reasonable language.

6. As to the meeting itself. The Russian Academy was the host and - whatever the pre-agreements - it is normal for other participants in a meeting to respect the Chairmanship, and organisation, of any such meeting. Whether Illarionov and Israel overstepped the mark in trying to control the progression of the Agenda is obviously a highly subjective call to make, and which different participants are now predictably recalling in terms of their own interests and agenda.
7. Independent discussion groups and persons have for years likened the emergence of green fundamentalism - of which climate change misrepresentation perhaps represents the example of greatest excess - to fascism and communism.

That someone like Illarionov, who has undoubtedly experienced totalitarianism up close and personal, should create a diplomatic sensation by making similar assertions stridently in public is remarkable. That he makes the statements in the immediate aftermath of the murder in Moscow of US journalist Paul Khlebnikov (journalist-editor of the Russian edition of *Forbes* magazine) is also courageous.

8. The rejected letter to Nature that I include may seem trivial in comparison with the Illarionov incident. However, though a minor incident, it is far from trivial.

At the core of the problem of misleading the public on climate change lies the refusal of leading journals such as Nature and Science to face up to their complicity in publishing egregious pieces of science propoganda, and then suppressing cogent and justified criticism. The rejected letter to the Editor epitomizes this.

DOCUMENT A

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REMARKS BY PRESIDENTIAL ECONOMIC ADVISER ANDREI ILLARIONOV AT
A PRESS CONFERENCE ON RESULTS OF THE CLIMATE CHANGE AND KYOTO
PROTOCOL SEMINAR IN MOSCOW, ALEXANDER HOUSE, 17:00, JULY 8,
2004

Illarionov: We have a few minutes left and I would like to tell you about the impressions on the two-day seminar that has just ended.

Yuri Antonovich and I have mentioned the fact that this is the first seminar of its kind that we have managed to arrange and it was accidental.

Over almost a year we have repeatedly asked our foreign partners who advocate the Kyoto Protocol and who insist that Russia should ratify the Kyoto Protocol, and we have invited

them to meet and discuss these issues, present arguments and counter-arguments and discuss them jointly. But we have not received any reply for a year. These people persistently refused to take part in any discussion.

Nine months ago, at an international climate change conference in Moscow, ten questions concerning the essence of the Kyoto Protocol and its underlying theory were submitted to the IPCC. We were told that the reply would be given within several days. Nine months have passed since then but there has been no reply, even though we have repeated our inquiries on these and the growing number of other related questions.

Instead of getting replies to our questions, we kept on hearing that replies did not matter. What was important is that whether or not Russia trusts Britain, the European Union and the countries that have ratified the Kyoto Protocol and that have been exerting unprecedented pressure on Russia to ratify it. This is why it was so important for us to arrange a real meeting and a real discussion of real problems with the participation of foreign scientists who have different views in order not to stew in one's own juice, as Yuri Antonovich put it, but to hear the arguments not only of our Russian scientists but also the arguments and counter-arguments from scientists in other countries.

We did get such an opportunity and over the past two days we heard more than 20 reports, we held detailed discussions, and now we can say that a considerable number of the questions we formulated and raised have been somewhat clarified, just as some other questions have.

I would sum up my conclusions in six points. The first one concerns the nature and the contents of the Kyoto Protocol. This is one of the biggest, if not the biggest, international adventure of all times and nations. Frankly speaking, it's hard to recall something like this of the same scale and of the same consequences, just as the lack of any grounds for action in field.

Basically, none of the assertions made in the Kyoto Protocol and the "scientific" theory on which the Kyoto Protocol is based been borne out by actual data. We are not seeing any high frequency of emergency situations or events. There has been no increase in the number of floods. Just as there has been no increase in the number of droughts. We can see that the speed of the wind in the hails in some areas is decreasing contrary to the statements made by the people who support the Kyoto Protocol. We are not witnessing a higher incidence of contagious diseases, and if there is a rise, it has nothing to do with climate change.

If there is an insignificant increase in the temperature it is not due to anthropogenic factors but to the natural factors related to the planet itself and solar activity. There is no evidence confirming a positive linkage between the level of carbon dioxide and temperature changes. If there is such a linkage, it is a reverse nature. In other words, it is not carbon dioxide that influences the temperature on Earth, but it just the reverse: temperature fluctuations are caused by solar activity influence the concentration of carbon dioxide.

The statistical data underpinning these documents and issued in millions of copies are often considerably distorted if not falsified. The most vivid example of that is the so-called "ice hockey stick", or the curve of temperature changes on the planet over the past 1000 years. It is alleged that there were insignificant temperature fluctuations for 900 years but there was a sharp rise in temperature in the 20th century.

A number of scientific works published lately show that in order to produce this "ice hockey stick", nine intentional or unintentional, I don't really know, mistakes were made that led to distortions in initial data and final results. Using the words of famous poet Vladimir Vysotsky, everything is not the way it should be.

Second, in respect to the presentation made by representatives of the so-called official team of the British government and the official British climate science, or at least how they introduced themselves at the seminar. I personally was surprised by the exceptionally poor content of the papers presented. During the past two years I took part in many international meetings, seminars, conferences and congresses on these issues both in Russia and in many of the countries, including the seminar that we had today and yesterday. Honestly, these papers and presentations differed dramatically from what is usually offered at international congresses and conferences.

Simultaneously, they revealed an absolute - and I stress, absolute inability to answer questions concerning the alleged professional activities of the authors of these papers. Not only the ten questions that were published nine months ago, but not a single question asked during this two-day seminar by participants in the seminar, both Russian and foreign, were answered.

When it became clear that they could not provide a substantive answer to a question, three devices were used. And I have to say it now although has not direct bearing on the Kyoto Protocol and the content of the extremely interesting presentations made during the past two days.

The British participants insisted on introducing censorship during the holding of this seminar. The chief science adviser to the British government, Mr. King, demanded in the form of an ultimatum at the beginning of yesterday that the program of the seminar be changed and he presented an ultimatum demanding that about two-third of the participants not be given the floor.

The participants in the seminar who had been invited by the Russian Academy of Sciences, they have been invited by the president of the Academy of Sciences Yuri Sergeyevich Osipov. Mr. King spoke about "undesirable" scientists and undesirable participants in the seminar. He declared that if the old program is preserved, he would not take part in the seminar and walk out taking along with him all the other British participants.

He has prepared his own program which he proposed, it is available here and my colleagues can simply distribute Mr. King's hand-written program to change the program prepared by the Russian Academy of Sciences and sent out in advance to all the participants in the seminar.

A comparison of the real program prepared by the Academy of Science and the program proposed as an ultimatum by Mr. King will give us an idea of what scientists, from the viewpoint of the chief scientific adviser to the British government, are undesirable. In the course of negotiations on this issue Mr. King said that he had contacted the British Foreign Secretary Mr. Straw who was in Moscow at the time and with the office of the British Prime Minister, Blair, so that the corresponding executives in Britain should contact the corresponding officials in Russia to bring pressure on the Russian Academy of Sciences and the President of the Russian Academy of Sciences to change the seminar's program.

When the attempt to introduce censorship at the Russian Academy of Sciences failed, other attempts were made to disrupt the seminar. At least four times during the course of the seminar ugly scenes were staged that prevented the seminar from proceeding normally. As a result we lost at least four hours of working time in order to try to solve these problems.

During these events Mr. King cited his conversations with the office of the British Prime Minister and had got clearance for such actions.

And thirdly, when the more or less normal work of the seminar was restored and when the opportunity for discussion presented itself, when questions on professional topics were asked, and being unable to answer these questions, Mr. King and other members of the delegation, turned to flight, as happened this morning when Mr. King, in an unprecedented incident, cut short his answer to a question in mid sentence realizing that he was unable to answer it and left the seminar room. It is not for us to give an assessment to what happened, but in our opinion the reputation of British science, the reputation of the British government and the reputation of the title "Sir" has sustained heavy damage.

The next point brings us directly to the Kyoto Protocol, or more specifically, to the ideological and philosophical basis on which it is built. That ideological base can be juxtaposed and compared, as Professor Reiter has done just now, with man-hating totalitarian ideology with which we had the bad fortune to deal during the 20th century, such as National Socialism, Marxism, Eugenics, Lysenkovism and so on. All methods of distorting information existing in the world have been committed to prove the alleged validity of these theories. Misinformation, falsification, fabrication, mythology, propaganda. Because what is offered cannot be qualified in any other way than myth, nonsense and absurdity.

Finally, my last point is why it happens and how the whole thing can be described. When we see one of the biggest, if not the biggest international adventures based on man-hating totalitarian ideology which, incidentally, manifests itself in totalitarian actions and concrete events, particularly academic discussions, and which tries to defend itself using disinformation and falsified facts. It's hard to think of any other word but "war" to describe this.

To our great regret, this is a war, and this is a war against the whole world. But in this particular case the first to happen to be on this path is our country. It's unpleasant to say but I am afraid it's undeclared war against Russia, against the entire country, against the left and the right, against the liberals and the conservatives, against business and the Federal Security Service, against the young and the old who live in Moscow or in provinces. This is a total war against our country, a war that uses all kinds of means.

The main prize in this war for those who have started it and who are waging is the ratification by Russian authorities of the Kyoto Protocol. There is only one conclusion to be made from what we have seen, heard and researched: Russia has no material reasons to ratify this document. Moreover, such a ratification would mean only one thing: complete capitulation to the dangerous and harmful ideology and practice that are being imposed upon us with the help of international diplomacy.

This is not a simple war. Like any war it cannot be easy and simple. Regrettably like any war it has its losses and victims, and we must understand that. The main thing is that we have now

obvious evidence that we have got over the past two days, although we had some hints before that time, and it was the approach to Russia practiced by some people attending the seminar, an approach to Russia as a kind of banana republic, an approach to a country that is not a colony yet but about to become it as soon as it ratifies the document. At least we now know how people in colony feel towards other people who are trying to make them a colony.

And maybe the last touch. During the discussion of the economic impact of the ratification of the Kyoto Protocol and of when Russia will achieve the 1990 emission level, one of the representatives of this official British team of scientists and government officials said quite blatantly: *Russia cannot expect an increase in the population, on the contrary, the population will decrease. And as long as you reduce your population, you can meet the Kyoto Protocol requirements.*

Thank you for your attention. The remaining small team is ready to answer your questions.

Izrael: Just a couple of words to add. The Kyoto Protocol aims to impoverish our country, and not only us but our children and grandchildren, I'd like to emphasize that, because the more time passes the more we will have to invest to meet the requirements of the Kyoto Protocol.

Illarionov: And maybe the very last point. Indeed Russia has found itself in the forefront of this war. We haven't chosen it. We did not want and do not want to war. This war has been imposed on us. The fate of our country, the fate of our children, as Yuri Antonovich has just said, and the fate of the entire world will depend on the outcome of this war.

There have been examples in our fairly recent history of how a considerable portion of Europe was flooded with the brown Nazi ideology, the red Commie ideology that caused severe casualties and consequences for Europe and the entire world. Now there is a big likelihood that a considerable part of Europe has been flooded with another type, another color of ideology but with very similar implications for European societies and human societies the world over. And now we in Russia are facing a historical opportunity: are we going to let the genie out of the bottle as the previous generations let the Nazi and Communist genies out of the bottles or not?

Q: My question is to the representative from Australia. Unfortunately I did not get his name -

Illarionov: William Kininmonth.

Q: As far as I know Australia has refused to ratify the Kyoto Protocol. Can you tell us if Great Britain and the European Union exerted the same kind of pressure on Australia when it was thinking about whether or not it should ratify the Kyoto Protocol? And how can you explain what is now happening to Russia?

Kininmonth: Getting to the Australian situation, very early after Kyoto, the Australian government and the Prime Minister said that Australia was not going to ratify the Kyoto Protocol because of the impact on the economic conditions in Australia. It would mean the loss of jobs and the export of jobs because Australia is essentially a country that has a lot of energy-intensive industries, and their growth would be on energy-intensive industries. So the Prime Minister was very categorical, and he has been since that time that Australia would not ratify the Kyoto Protocol.

Q: Was there any pressure on Australia to ratify?

Kininmonth: I cannot answer whether in the government area there was pressure or not. There certainly was not pressure as is experienced here in Russia, but Australia very early, the Prime Minister said that Australia was not going to ratify for the reasons that I gave.

Q: My second question is for Andrei Nikolayevich. Doesn't the Academy of Sciences have security guards so that you wouldn't have to lose four hours and wouldn't have your seminars disrupted?

Illarionov: Before I answer your question I've just been asked that here is a package of materials distributed at the seminar and is available at the exit. You will be able to get the hand out.

As for the guards, I have seen them. But I understand that the question was that Russian participants tried to do all they could in order that the seminar's work were normal. And unfortunately, from this two-day experience, I have made it clear for myself that different participants in the seminar pursued different goals. For some participants the main goal was the search for the truth, understanding of real processes. Other people had the task of disrupting the seminar, so that other people who were seeking the truth could not do so. And this, probably, accounts to what was taking here over the past two days.

Izrael: I will add something because Andrei Nikolayevich has already said that Sir David King, adviser to the British government - he had brought several scientists along with him and he insisted that the program should include among the speakers only those scientists and no other. So, he came over, selected scientists at his discretion, scientists who were to be given the floor in his opinion and scientists who were to be denied an opportunity to speak. He even said that you are in the minority and we are not going to listen to you.

Q: Japanese paper Mainichi. I have a question to Mr. Illarionov. Last month when Foreign Minister of Japan came to Moscow she met with high-ranking officials of the Russian government and one of them told her that Russia will soon be ready to get the answer about the Kyoto Protocol ratification issue and he also told her that the answer will be in favor of Japan. Pretty much indicating that Russia will be ratifying the protocol pretty soon. Do you think that will happen and has Mr. Putin made the decision about ratifying or not ratifying the protocol?

Illarionov: I'll try to answer each part of your question. The first part is, you said that the decision would be taken in favor of Japan. As you understand, a decision in favor of Japan means a refusal to ratify the Kyoto Protocol. Because the ratification of the Kyoto Protocol will hit hardest at those countries which had been careless enough to assume obligations to cut carbon dioxide emissions, and Japan was one of such countries.

In February a large international seminar was held in Moscow on the issues of the Kyoto Protocol and climate change which was attended among others by representatives of Japan, including representatives of Japanese business and the government of Japan. I remember the presentation by a Japanese representative who described how Japan was already doing everything possible to comply with the terms of the Kyoto Protocol.

That gentleman said that Japan was doing everything to reduce economic activities in Japan, including the movement of production outside Japan thus aggravating the economic crisis in which Japan has been for the last 14 years.

It is known that in the last 14 years Japan has been lagging far behind other developed states and instead of bridging the gap between itself and the United States and even Europe, it was increasing the gap. So, the introduction of the Kyoto Protocol through ratification, for instance, possible ratification by Russia would mean that Japan would quickly start to move back to the state in which it was a decade ago, it would be weak, poor and backward. I don't think it would be in the interests of Japan.

As for the reference to the remarks by you Foreign Minister who had met with an unidentified Russian officials who allegedly promised your Minister early ratification of the Kyoto Protocol by the Russian side, you understand that in wartime, and we're aware that it is a war, there is always room for the fifth column. You know what the fifth column is.

And the people in the fifth column are working actively because they want Russia to pass such a decision as quickly as possible and they use every trick in the book starting from bribery and ending with intimidation, threats and blackmail.

So, you as a close observer of events in Russia has a unique chance to see, identify and even interview some of the representatives of the fifth column.

And finally, regarding the last part of your last question. If the Russian Federation ever decides to ratify the Kyoto Protocol such a decision will have been taken not only on the basis of substantive analysis, not for substantive, but for some other reasons. We cannot fully rule that out just as we cannot fully predict climate change on the planet. But in any case, if such a decision is taken, it would deal, I repeat, a very serious blow to Russia, Japan, the European Union and Canada, the countries and regions which were rash enough to assume such obligations.

And it would deal a powerful blow on the whole humanity similar to the one humanity experienced when Nazism and communism flourished.

Q: The Japanese Information Agency. Mr. Illarionov, a very simple question. Why don't you go along with the words of your boss, President Putin, who said quite clearly: "We are in favor of the Kyoto Protocol"?

Illarionov: I will permit myself to remind you of the words said by President Putin. President Putin has never said that he supported the Kyoto Protocol. President Putin said on May 24, 2004 that he supported the Kyoto process. So, I am sorry, but you can't say that I do not support President Putin on this issue.

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DOCUMENT B

From: "Cox, Peter" <peter.cox@metoffice.com>
To: Timo Hameranta <timo.hameranta@pp.inet.fi>, David King <dak10@cam.ac.uk>
Subject: RE: New studies: No alleged enhanced AGHG effect

Date: Tue, 13 Jul 2004 12:05 AM

Dear Timo,

Thanks for your email. It is nice to be back in an environment in which scientific debate is encouraged!

My comments in the Moscow Times were personal opinions about the way in which last week's Moscow meeting was manipulated to stifle debate and give a biased view of the science of climate change. I am sure this is something that you would agree is not healthy, whatever side of the debate one is on.

I therefore welcome the opportunity to let you know what really happened in that meeting, and to respond to some of the points you make in your email.

The original Moscow meeting was to be a scientific exchange between UK and Russian scientists working on aspects of climate change. Unfortunately, the original agenda for the Moscow meeting was significantly changed by Andrei Illarionov and Yuri Izrael, who invited some well known climate sceptics to speak at the meeting. This made the meeting much more advisory than it needed to be, but would have been fine if we had the opportunity to debate the science in an open way. Unfortunately, such debate was strongly suppressed by Andrei Illarionov and Yuri Izrael.

Andrei Illarionov in particular, dominated the question and answer sessions, allowing minimal input from other delegates (including other Russian Academicians). After Sir John Houghton's talk, Illarionov asked 8 consecutive questions before allowing any answers, and the discussion was cut off before the UK delegation could respond to all of his points!

Despite the extraordinary running of this meeting (which is unlike any "scientific" meeting I have ever been to), the UK delegation did manage to make the following points:

- 1) Human activities (especially the burning of fossil fuels) are resulting in CO₂ emissions, and the amount of emissions from each region is well known.
- 2) Atmospheric CO₂ concentration has increased by more than a third since pre-industrial times.
- 3) The cause of this CO₂ increase is undoubtedly the human emissions of CO₂, and this has been known since the mid 1950s (when Hans Suess recognised that there was a growing isotopic signature of fossil fuel CO₂ in the atmosphere).
- 4) CO₂ is a greenhouse gas (this has been known since the 19th century) which traps the outgoing heat from the Earth's surface, providing a warming "blanket".
- 5) The global average temperature on Earth has increased by about 0.7 degC over the last 100 years, with most of this change occurring in the last 30 years.
- 6) The trend in global temperatures has not been continuously upwards over the last century, because CO₂ is not the only factor which affects climate. Other human pollutants (such as sulphate aerosols) are important, and natural factors such as variations in the Sun and

volcanic eruptions also play a role.

7) Climate models which include all of these factors are now able to reproduce the observed changes in global temperatures over the last 100 years. These models indicate that the warming over the latter part of the 20th century is primarily due to greenhouse gases (especially CO₂), leading the IPCC to make the statement "there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities".

8) Solar variability appears to have had some effect on climate during parts of the 20th century, but is unable to explain recent warming (The Sun's activity declined in the late 1990s even though temperatures have continued to increase).

9) Without attempts to reduce the growth in CO₂ emissions (e.g. through the Kyoto process), CO₂ concentrations will increase rapidly in the 21st century, producing an enhanced greenhouse effect and thereby climate change and impacts on humankind.

I think most of us who have studied the science of climate change would find it hard to disagree with these points, but Illarionov and his delegation challenged even the most well established scientific facts (e.g. that the observed CO₂ increase over the last century is a result of fossil fuel emissions), and orchestrated a press-conference along these lines (from which dissenting voices were excluded). So it is nice to be able to tell you what really happened!

With regard to your specific email, I have the following points to make:

a) The degree of consensus on the science underlying recent climate change is really quite extraordinary, such that I could provide a list of many, many thousands of peer-reviewed studies which underpin the conclusions of the IPCC (if I was so inclined :-))

b) Most of the papers you quote are certainly not "sceptical" about anthropogenic climate change. Just to give one example, the report by Betts and Best (two of the people in my team at the Hadley Centre) certainly does not suggest that CO₂-induced climate change is unimportant, but rather that its effects will be further amplified in cities by the heat released from energy use. There are also many other papers you cite which serve to remind us of the complexity of the climate change problem (e.g. interactions between clouds and aerosols, or the effects of "solar dimming" by aerosols), but which are in no way inconsistent with the IPCC's conclusions. So I think you need to review your list of "sceptical" papers quite carefully...

c) The records of surface temperature warming, and tropospheric warming from radiosondes and MSU actually agree very well apart from the first few years of the MSU period (as shown in the attached picture).

d) Having said all of this, I am sure we can agree that we do not know everything about the climate system, and no sensible scientist would suggest that we do (or ever will). However, many of us think that we already know enough to act given the possible impacts of accelerating climate change.

Regards

Peter Cox

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DOCUMENT C

July 12, 2004

To: Colleagues.on climatesceptics

The letter below was submitted to the Correspondence columns of *Nature* the day after the Mann et al. *Corrigendum* appeared.

Nature's editors have chosen not to accept the letter, on the grounds that it is a technical comment more suited to their Matters Arising section, for which (interestingly) they assert competition for space is acute. ("Interestingly", because one would have thought it a duty of such a journal as *Nature* to publish a Matters Arising section whose prime aim was correction of errors, or scientific merit of the comment, rather than shoehorning such comments into a pre-determined space.)

Naturally, I disagree with their judgement. The matter is of compelling and wide public interest, and the letter is no more technical than many others that have appeared in their Correspondence column.

One can only try.

Bob Carter

Professor R.M. (Bob) Carter
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AUSTRALIA

Sir,

The Corrigendum¹ by Michael Mann and co-authors on global-scale temperature patterns and climate forcing is of more than usual interest, because the paper which is being corrected² played a key role in shaping the Intergovernmental Panel on Climate Change's view³ that late 20th climate warming was unusual in magnitude.

The last sentence of the Corrigendum reads - "None of these errors affect our previously published results". This statement is incorrect. The errors listed by Mann et al. in fact led to several significant effects, as has been rigorously treated by McIntyre and McKittrick⁴. Most importantly, a re-run of the Mann et al. analysis of proxy climate data with the input errors corrected leads to an output in which late 20th century warming is seen to lie within earlier natural bounds⁴. The (corrected) Mann et al. graph shows that the northern hemisphere temperature index attained its highest values in the early 15th century, and that the 20th century warming cycle has so far only equalled a secondary warm peak that occurred late in the 15th century.

Given the great public concern regarding the possibility of anthropogenic climate change, scientific journals, and their authors and referees, need to address these matters with punctilious honesty.

Bob Carter
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1. Mann, M.E., Bradley, R.S. & Hughes, M.K. Corrigendum. Global-scale temperature patterns and climate forcing over the past six centuries. *Nature* 430, 105 (2004).
 2. Mann, M.E., Bradley, R.S. & Hughes, M.K. Global-scale temperature patterns and climate forcing over the past six centuries. *Nature* 392, 779-787 (1998).
 3. Intergovernmental Panel on Climate Change (IPCC) *Climate Change 2001, Third Assessment Report* (Houghton, J.T. et al., eds.), Cambridge University Press, 881 pp. (2001).
 4. McIntyre, S. & McKittrick, R. Corrections to the Mann et al. (1998) proxy data base and northern hemispheric average temperature series. *Energy & Environment* 14, 751-771 (2003).
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