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CLIMATE CHANGE JEKYLLS AND HYDES

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There are two routes to engagement with climate change: one the broad highway of the mainstream media, the United Nations, the Intergovernmental Panel on Climate Change (IPCC), the big international environmental organizations such as Greenpeace and Friends of the Earth. This is where the 'respectable' people are, the 'Doctor Jekylls', as it were. This is where things are relaxed, where doors and telephones are open, where relations with authority are satisfactory, even if there are political differences. There is a live-and-let-live atmosphere, an agreement to differ.

Not so along the second route: the route of the 'chemtrails' activists, the Mr. Hydes of climate change. And there is a very simple reason for this. The coziness of the former milieu is predicated on absolute denial and rejection of the latter along with everything pertaining to it. This denial has been an important element in the learning experience of the Mr. Hydes, which typically begins from unmediated evidence of the senses, followed by a lonely passage through the back lanes of the internet to emergence in a rather problematic landscape with more than its fair share of stigmatized personalities: 'conspiracy theorists', UFO freaks, 'right-wing' extremists, alleged and actual nutcases, hypochondriacs, and also the authentically ill.

'Chemtrails'

The story has been told so often that for me it is tedious to recite the basics yet again: the customary distinction between 'chemtrails' and 'contrails', the grim tales of heavens darkened by the continual passage back and forth of military aircraft apparently spraying some substance until the skies become permanently overcast. Reports of the spraying have been coming in for a number of years from vast swathes of Europe and North America, and from elsewhere. Though these reports are not fictitious, they are the wrong place to start the discussion. A more logical starting point is the 1992 report of the American National Academy of Science: "[Policy Implications of Greenhouse Warming](#)", with its official conclusion that the most effective method for mitigation of global warming is spraying of reflective aerosol compounds into the atmosphere utilizing commercial, military and private aircraft.

For those lacking the time to study the voluminous Academy of Science report there is the 'light' alternative of [Gregory Benford's anti-Kyoto polemic](#) in 'Reason' magazine, where the linkage between rejection of Kyoto and promotion of various 'geoengineering' schemes, including aerosol spraying, could not be clearer. For theorists there is Jay Michaelson's highbrow but not prohibitively long "[Climate Change Manhattan Project](#)". And of course there is Edward Teller's "[Earth needs a Sunscreen](#)" piece in the Wall Street Journal.

Still better as a more recent introduction for European readers is "[White Skies](#)", the English translation of Gabriel Stetter's first 'chemtrails' exposition in the German magazine 'Raum + Zeit'. And I myself have published a text called "[Strategies against Climate Change](#)".

The Benford, Michaelson and Teller articles give some idea of where the heads of the planet's thousands of 'chemtrails' watchers must have been at the beginning of 2004 when there suddenly appeared in Britain's *Guardian* and *Observer* newspapers and on the BBC a series of journalistic reports that were widely (and over-optimistically) interpreted as foreshadowing a 'limited hangout'

indicating that at least some sections of the world's power elite were preparing to take responsibility for their own actions.

On December 18, 2003, David Adam published a [piece in the *Guardian*](#) revealing that “levels of sunlight reaching Earth's surface have declined by up to 20% in recent years because air pollution is reflecting it back into space and helping to make bigger, longer-lasting clouds.” ... This global dimming effect, said Adam, could have implications for everything from the effectiveness of solar power to the growth of plants and trees. “Over the past couple of years it's become clear that the solar irradiance at the Earth's surface has decreased.”

Next came Alex Kirby of the BBC with his [announcement of a conference](#) to be held in Cambridge U.K., organized by the Tyndall Centre for Climate Change Research and the Cambridge-MIT Institute, and aimed at studying possible ways of using ‘engineering’ to help the world adapt to increasing climate change ‘while ignoring political correctness’. Kirby conceded that “the organizers say many options appear at the moment very unlikely to work, with some even appearing to be crazy.” But they insist that these options be evaluated. “They say engineering will probably have to play its part in cutting greenhouse gases by the huge amounts necessary.”

The Cambridge conference was to examine four main sets of possibilities: (i) sequestering (storing) carbon dioxide, for example in the oceans, by removing it from the air for storage, or by finding improved ways of locking it up in forests; (ii) modifying the albedo (reflectivity) of clouds and other surfaces to affect the amount of the sun's energy reaching the earth (iii) climate design, for example by long-term management of carbon for photosynthesis, or stabilising ocean currents by river deviation, and (iv) providing large-scale migration corridors for wildlife.

At the conference Professor Hans-Joachim (John) Schellnhuber told BBC News Online that: “The Kyoto protocol is in a very difficult position, and it may be necessary to find other exit strategies. We may find we're in a cul-de-sac and have to think of other policies which transcend it.”

An article entitled “[Giant Space Shield to Save the Planet](#)” appeared in the “Observer” of 10th January. It mentioned an extraordinary plan, “underlining the catastrophic implications of climate change”, under which “scientists now want to curb the sun's life-giving influence to save mankind from its biggest threat: global warming.”

“Key talks involving the Government's most senior climate experts have produced proposals to site a massive shield on the edge of space that would deflect the sun's rays and stabilise the climate. Hundreds of thousands of tonnes of metallic ‘scatterers’ would be ejected into the upper atmosphere under the plans. In addition, billions of tiny barrage balloons could serve as a secondary barrier to block rays from the Earth's nearest star.

On land, giant reservoirs holding saline water could be built to offset the rise in sea levels caused by the melting of the polar ice-caps. The oceans, too, would be modified to cope with the planet's increasingly warmer weather. Massive floating cloud-making machines would be dotted across their surface while, below, large plantations of algae would be grown to absorb greenhouse gases from the atmosphere.”

“These are exotic ideas,” Professor Schellnhuber admitted. “The present climate policy does not seem to be working... It is a desperate situation and people should start thinking about the unconventional. Preventative plans on a larger scale are needed.”

The Tyndall Centre

It was against this background that our discussion group sought to make contact with the Tyndall Centre, our aim being to explore how far dialogue was possible between concerned citizens and these scientists who in their concern to draw attention to the dangers of climate change had not shrunk from associating themselves with such strange and alarming proposals.

With some persistence, we finally extracted some response from Professor Schellnhuber, but almost immediately he handed over the task of liaising with us to his research assistant Sarah Cornell.

This is what she had to say to us:

“You ask three key questions:

- Is it feasible to optimise climate through geoengineering? (you refer specifically to alteration of the planet's albedo through cloud formation.)
- Do aircraft contrails have an effect on climate?
- Are aircraft contrails being deliberately put in the sky?

We, as scientists, can comment on some aspects of these questions..... There is a great deal in your (argument) that is speculation, or a matter of opinion and political choice. Of course, as scientists, we have a responsibility to engage with the political world (and I'd argue that our politicians have a duty to understand science too – we must find a common meeting point). However, as John said in his last e-mail to you, we cannot comment ‘scientifically’ on these issues of trust and political engagement. It is our role to inform society about climate change and its impacts, and beyond that, our views are no more authoritative than those of any other member of society.”

“It is obvious,” Dr. Cornell continued, “that human activities have already altered some of the key functioning systems of the planet. In the last couple of centuries, industrialisation and the power of technology have upped the pace of human-induced change. In other words, we know that what we do has an effect on the Earth system, so the crux question for geoengineering is, ‘do we know enough to control or manipulate our effects?’ ‘Geoengineering’ could be different in scale from existing human-induced change, but its principal difference.....is that it would be intentional manipulation of the Earth system, not accidental or incidental like most anthropogenic change has been so far. The economic and technological hurdles, despite being huge, are not as great, perhaps, as the socio-political, ethical and system-scientific issues that would need to be resolved first – these are all issues that need ongoing wide, frank and open debate before any macro-engineered solution could be begun.

One of the conclusions of the experts at the symposium was that tweaking the atmosphere for climate optimisation (altering albedo, for instance) was one of the least tractable approaches – because of the complexity of atmospheric chemistry, combined with the huge risks associated with getting it just a little bit wrong. This particular geoengineering option isn't excluded because it is ‘science fiction’ – on the contrary, our knowledge of the science facts tell us unambiguously that trying to manipulate the atmosphere will not lead to climate optimisation. Sequestration of CO₂ through various means (forest growth, limestone formation) would possibly be a more likely candidate for climate change mitigation for the next decades or centuries, because the processes are generally rather better understood and errors likely to lead to less risky outcomes, and indeed research schemes are active in bio- and geo-sequestration already.

It is very likely that the most significant climate impact of aircraft is not by means of alterations of the planetary albedo, but by the chemistry of fuel burning, particularly in the upper layers of the

troposphere. Having said that, the USA's CERES programme (in partnership with other large-scale multinational initiatives) was created precisely because the exact role of clouds in the planet's energy balance and climate is not yet understood. Its outputs so far have confirmed that the cloud-climate feedbacks are complex and uncertain. If you wanted to cool the planet by making clouds, you would be very ill-advised to choose a mechanism (laying jet contrails) that made clouds with such a short effective life, of the wrong type and in the wrong place (indeed, contrails are likely to contribute to warming not cooling), and that was also much more likely to add to the warming of the planet by increasing the concentrations of climate-active greenhouse gases. Water vapour, CO₂ and nitrogen oxides (precursors to climate active species, particularly ozone and methane) are formed by fuel burning, and air travel is the fastest growing contributor to the greenhouse gas budget.

Air transport in general is undeniably changing the look and behaviour of the atmosphere, but this is a wholesale social trend – people are demanding and using cheap flights, and expert consensus is that this is contributing to global warming (see the IPCC's summary of its Third Assessment Report). Your concern seems to be that emissions from aircraft are being altered deliberately to 'sunscreen' the planet. First of all, as I said, the radiative and chemical effects of the contrails tend to work in the wrong direction for cooling, and the net effects globally are uncertain or indeterminate.

Secondly, there is no evidence at all in the atmospheric chemistry that chemically altered emissions are being generated. Significant changes due to increased air transport have been detected in aerosol chemistry, and they are exactly what would be expected. Several major global research partnership programmes have sampled and analysed rainwater and aerosol around the world in recent decades – for example, the TRACE series ran through the 1990s, looking at the atmospheric transport and chemical changes of aerosol, preceded in the 1980s by AEROCE - so we now understand better than ever how human activities have altered the natural biogeochemistry of the planet. Spatial and time trends in aerosol chemistry correlate very well with changes in industrialisation, urbanisation, land use and transport patterns.

I studied the organic material in aerosol for a decade, and in 2002, I published a review of the literature on organic matter in aerosol and rain over the last century; other groups have worked in the same area, at all levels in the atmosphere, and published similar reviews for organic gases, too. We have found nothing to suggest that the nature of the organic matter in aerosol has changed in this period. There is certainly no indication that either organic matter or sulphate (the two most active materials for condensation nuclei for aerosol formation) have been put into the atmosphere, apart from the pollutants that we as society have tacitly accepted as normal and acceptable as a trade-off for our pursuit of economic improvements. These are a serious enough problem to address."

A first reaction

David Stewart, an American activist who had previously published on the internet a series of interviews with an anonymous chemtrails 'insider' from the Lawrence Livermore Laboratory henceforth known as "[Deep Shield](#)" responded as follows to Sarah Cornell's e-mail:

"In short we are told that it is possible but ill-advised to use contrails to effect a change in the climate.

Thus we are left with the possibility but still left in doubt as if it is taking place right now, or if it is taking place if it is on purpose instead of in consequence of faster travel and economic advances. We are, in effect, in the same spot we were at with Teller, the possibility is there but no one appears eager to say 'do it' or that it is being done.

One is left with asking: "Under what circumstances would geo-engineering in this manner be

considered and used?”

Considering that there must be some point in which the advantages far outweigh the possible consequences, we should be asking where that point is, what circumstances need be in place before a drastic use of aerosols would be necessitated. It seems that though it is possible no one wants to say that it is being done, at least no one who wants to come out and public about it.

Yes there are long-term effects and short-term effects. One must wonder if there is a case where the short term effects and needs outweigh the long term consequences. What is that case, what motivation would lead to the use of contrails to change the earth's atmosphere? Is there a set of circumstances where the ill-advised action becomes the best possible solution to a problem? If so, have we reached that point?

According to my source [the reference is to “Deep Shield”] we are at a point where the risks and the losses are far less bad than the problems we face. Thus the gamble is worth it, even if it is an utter failure.

We humans tend to have a habit of waiting until the last moment then overreacting when had we acted earlier on minor changes would have made a big difference. So there is a high probability that we have reached the point where a major risky action is needed simply because we delayed.

We already know that particulate matter in the atmosphere increases the albedo of the earth. Recently the news reported that the earth is more reflective than it was a couple of decades ago. Something is taking place to increase the reflectivity of earth. We are still left with the question if it is accidental or on purpose.”

No reply

Dr. Sarah Cornell never responded to David Stewart’s remarks, though they were among the more temperate and restrained of those put forward by members of our group. Other remarks were more heated: (e.g. “I cannot debate someone who plays an active role in participating in the demise of our natural planet and yet denies they have any involvement....I do not care what they have reasoned as what is best for the planet. I just want them to halt the spraying of these toxic chemicals into the atmosphere.”)

The situation was exacerbated by interventions by ‘chemtrails’ debunkers who, on learning of what Dr. Cornell had written to us, launched an incessant barrage of triumphalistic ridicule on the various related forums. They also entered into correspondence with Professor Schellnhuber, some of the character of which can be glimpsed in the appendix to this article included in the full version of the text posted at the closed [Ama Lahi website](#), to which access may be granted on request.

Dialogue on the content of Dr. Cornell’s letter:

1.

Colleague: All I can say at this point is that in my opinion Dr. Cornell's communication was straightforward, accurate and honest.

W.H: I think it would have been good if you had been able to present this conclusion to her as part of a documented critique of what she sent to us. This would show Dr. Cornell and her colleagues at

the Tyndall Centre that there is an overlap between their concerns and ours and that we should be participants in the same framework of discussion.

Colleague: Too bad the issues involved have become so hopelessly politicized.

W.H: This is a formulation that you seem to share with Dr. Sarah Cornell, who says: ‘We, as scientists, can comment on some aspects of these questions... There is a great deal else in your debate that is speculation, or a matter of opinion and political choice.’ As far as I am concerned the difference between the stance of a person who wants to tell the truth and a person who for allegedly political reasons judges that it is better not to do so, does not deserve to be called a ‘political difference’ or a matter of ‘political choice’. If a scientist, in the explanation he offers for a situation, rather than outlining what ‘political choice’ leads politicians to do, does the same thing himself/herself, he/she ceases to be a scientist (or rather ceases to deserve the respect claimed by science) and becomes a politician.

Colleague: For some reason I have a feeling I'm walking right into the Jaws of Death here but so be it. I interpret Dr. Cornell's comment above as follows: I think what she's saying is that the researchers themselves can comment on the specifically scientific aspects of a given project. (In my personal experience most scientists are actually very pleased to respond to public inquiry regarding the scientific aspects of their work as they tend to be somewhat isolated owing to the demands of such an intrinsically focused working environment.)

When Dr. Cornell says, “There is a great deal else in your debate that is speculation, or a matter of opinion and political choice” I think she is conveying by implication that public inquiry regarding the political, social and ethical considerations of a given project is considered to be the sphere of the public relations staff which are a part of every research institution.

In other words, it is the job of the researchers to conduct the studies and provide organized data - and it is the job of the public relations staff to generate news releases and other communications which serve to interpret the findings of the researchers to the non-scientist public.

For what it's worth I am going to add here that I spent 15 years as a research assistant in two labs of a major medical school doing specialized cell culture and microsurgery, so I know from direct experience that there is in fact a point beyond which scientists simply cannot be completely open about their work until it is completed, peer-reviewed and published. Also, the research process is demanding, sometimes tedious and endlessly repetitive, often thankless and very time-consuming as well as extremely rewarding and exhilarating - and it above all requires a specific ability to continually focus not only on a myriad of details but simultaneously on the Big Picture as well. One has to be temperamentally suited for this kind of work in addition to having an aptitude for it.

Bottom line - and based on my own experience - while I can understand why people might think that Dr. Cornell is withholding the desired answers to the questions at hand, it is my opinion that she is in fact being completely honest about what she personally is in a position to provide. It is up to the PR staff to interact with the public on other than the specifically scientific components of an institution's work in progress.

W.H: Whatever we conclude about Dr. Cornell, the fact is that some of the Lawrence Livermore Laboratory scientists participating in the Tyndall Centre conference were flagrantly political. Look at the [‘Active Climate Stabilization’](#) paper by Teller and others, which claims that its recommendations will enable:

1. “Every person's right to a decent ‘energy standard of living’ to be respected”

2. “Severe energy rationing not to be crammed down the throat of the Third World” (“Already a widely-rejected gambit and a self-evidently unethical one” [sic])

The politics here is jumping off the page. But at the same time public participation (including ‘Third World’ participation) in the debate is systematically blocked!!!! The blockage is a prerequisite for the Livermore scientists to be able to appoint themselves ‘Third World’ spokespersons and use terms like ‘self-evidently’.

Colleague: I've read this, too, and I was every bit as disgusted as you appear to be. I've read the texts of a great many of the last 25 years' climate change think-tank discussions and have found them to be permeated with a frankly patronizing orientation to ‘Third World’ considerations. I am being very restrained in my characterization here.

To allow myself a moment of spontaneous gut expression, I will say that not only does the ‘First World’ reserve the right to pollute unto death the basic life-support systems upon which every living being on this earth depends for survival, but it also reserves the right to link ‘solutions’ directly to their impact on the economy that THEY wish to sustain in order to support THEIR desired standard of living AND to micro-manage response to the negative impact(s) of anthropogenic climate change on the very people (easily 60% of the world's population) who are least equipped to deal with them.

Unbelievably arrogant, infuriating and unconscionable.

W.H: Let’s go back to Dr. Sarah Cornell, who states: “This particularly geoengineering option [aerosol spraying] isn’t excluded because it is ‘science fiction’ – on the contrary, our knowledge of the science facts tell us unambiguously that trying to manipulate the atmosphere will not lead us to climate optimisation...”

“If you wanted to cool the planet by making clouds, you would be very ill-advised to choose a mechanism (laying jet contrails) that made clouds with such a short effective life, of the wrong type and in the wrong place (indeed, contrails are likely to contribute to warming not cooling), and that was also much more likely to add to the warming of the planet by increasing the concentrations of climate-active greenhouse gases.”

Does this not contradict the assertions in the ‘Active Climate Stabilization’ paper, which claims to be an approach to ‘preventing BOTH TYPES of climate change’ (i.e. both cooling and warming)?

Colleague: Dr. Cornell’s point here is that ‘laying jet contrails’ (in the upper troposphere) as a methodology to achieve a net planetary cooling effect simply will not work as it has now been conclusively determined that aviation contrails and resulting persistent contrail cirrus actually exert a net WARMING effect on the atmosphere.

Note that she is not referencing the loading of the STRATOSPHERE with particulate emissions, which is an ENTIRELY different matter.

W.H: She says: “Your concern seems to be that emissions from aircraft are being altered deliberately to ‘sunscreen’ the planet. First of all, as I said, the radiative and chemical effects of the contrails tend to work in the wrong direction for cooling, and the net effects globally are uncertain or indeterminate. Secondly, there is no evidence at all in the atmospheric chemistry that chemically altered emissions are being generated.”

“There is certainly no indication that either organic matter or sulphate (the two most active materials for condensation nuclei for aerosol formation) have been put into the atmosphere, apart from the pollutants that we as society have tacitly accepted as normal and acceptable as a trade-off for our pursuit of economic improvements. These are a serious enough problem to address.”

I reiterate my previous remark and add that the second part of the statement contradicts my experience, because particularly in winter I see aircraft spraying something into the atmosphere over Athens and elsewhere. They are clearly not scheduled flights. They involve more than one plane flying back and forth in formation. I want an explanation what they are and what they are doing. An OFFICIAL explanation. If we don't get it we will have to sideline existing officialdom and replace it with officialdom that serves our needs better.

Colleague: I, too, am sick and tired of seeing, for the last five years, our skies being literally STRAFED with shaving cream-thick trails and resulting chaotically-spreading ‘cirrus’. One thing I can say here, and I think it's important to keep this in mind, is that what we are seeing is taking place in the upper troposphere - NOT in the stratosphere where the by now familiar-to-us-all Tellerian aerosol climate mitigation proposals are specifically designed to be deployed.

W.H: Mobilising public opinion about climate change while not telling the truth about geoengineering (and ‘chemtrails’), is IMPOSSIBLE.

Colleague: I think this is a very important point and I happen to agree with you. However, I would like to know if you are willing to at least consider the possibility that the 'true cover-up' re what we are seeing in our upper troposphere has to do with the over-saturation of same with the waste products of hundreds of thousands of aircraft per day just going about 'business as usual'. Doesn't anyone think it's possible that we may have reached critical mass as to what our atmosphere is capable of assimilating in this regard?

I think the science community IS trying to communicate something very important - and too many people refuse to listen. Think about it. What would happen if the research community were significantly more assertive (i.e. more openly PR-oriented) about their work which repeatedly shows that aviation contrails and contrail cirrus are in fact seriously perturbing atmospheric chemistry, atmospheric circulation and global hydrology cycles? This is not myth. It's the truth. What do you think would happen if the general public really started looking into this? Why do you think some of the more sophisticated of the chemtrails debunkers are so meticulous about derailing any substantive discussion of that very same research (Patrick Minnis, et al) they are always touting? They want complete control of any public dialogue that is even remotely likely to merge from an honest, unsparing look at the increasingly informative (and increasingly reproducible) research being completed by some very competent investigators.

2.

W.H: Today Tyndall sent me a copy of their magazine 'the effect', containing an interview with Dr. Schellnhuber entitled "Where next for climate research?" In it he says: "I'm forever asked about the importance of the US to global warming, but so rarely about the actual science of this planet. I want to explain the interesting science to help the public engage with science. I also never get asked about the ethical issues of justice and liability to global warming - so few people want to go near it. This is the not-in-my-backyard morality, where the polluter-pays principle so obviously shall not apply in our own backyards."

My question: is it easier to complain that one is never asked about ethical issues of justice and liability to global warming than it is to expose oneself, if only 'off the record', to the people who will

actually RAISE these questions, IF THEY ARE ALSO GOING TO WANT TO TALK ABOUT CHEMTRAILS???' (again, even 'off the record'). If the two sides have to start off talking in coded and/or Aesopian language, is this not preferable to perpetuation of the present situation of scientists trying to hide behind their index fingers? What suffers as a result is not the prestige of the political or politico-economic system *but the prestige of science and of scientists*. The people who do want to talk justice and global warming AND CHEMTRAILS are being subjected to never-ending psychological attrition [and worse] from a myriad of amateur and professional operatives without this seemingly ever coming to the attention of climate scientists, who merely observe that they never get asked about the ethical issues of justice and liability to global warming? What is/are Tyndall, and other foundations, doing about this?

Colleague: I know what you mean. In fact the relative failure of the science community to much more assertively connect with the general public on, at the very least, information regarding the climate change problem upon which concerned individuals and groups could in fact begin to act has been a source of considerable anguish to me personally for some time now.

On the other hand - having done so much research reading over the last five years and having, in the process, gotten a fairly good overview of the findings upon which the science community has, and has not, to date, reached consensus, I have to say that I can understand the immense difficulty the science community faces where transmission, under current geopolitical circumstances, of such a complex (and politically and economically volatile) body of information from the research environment to the public domain is concerned.

The fact is that several science writers have been trying to communicate with the public for years now. Seriously, if you want to see just one example of a very good contribution in this direction, please consider getting a copy of the following book: '[Boiling Point](#)' by Ross Gelbspan. Believe me, Gelbspan has done his homework in the science department. I know this because I already have most of the material to which he refers in his excellent summation of climate change research to date. This was a very difficult job he took on, interpreting this material for the lay public, and he has more than done it justice. He also understands and manages to very clearly convey the political challenges we face in the years to come.

Further, he offers concrete suggestions for some working solutions as for what [Tyndall](#) is doing, I'm familiar with their web venue and I would say they're doing quite a lot. They are geared toward direct interaction with the societal sectors that are in fact already in a position to exert the influence necessary for initiation of the changes in policy which will be required to deal with emergent climate-change-related challenges.

W.H: Even if it is not possible to get a Dr. Schellnhuber at this stage of the game to oppose some of our beloved operatives in their role as 'chemtrails' debunkers, it is worth trying to achieve their concrete marginalisation as anthropogenic climate change 'sceptics'. That is better than *not opposing them at all*, except at the level of hand-wringing and unfocused moral protest.

Colleague: I think the research community is already more than aware of the problem of climate change 'sceptics'. Dealing with 'sceptics' (and with the standard peer-review process for that matter) are just part of the territory whatever field of research one is involved in.

And I don't necessarily agree with you that the research community, or individual scientists, are "not opposing (climate change debunkers) at all." You are leaving out a crucial component of the total picture here and that is the absolutely necessary emergence of a critical mass of public will to face and begin to deal with reality where this issue is concerned. There is a great deal of reliable information out there but it is useful only in proportion to the general public's willingness to at least

consider it. We have enough scientists, and they are doing a great job under less-than-ideal political circumstances. What we need is more educators.

W.H.: Places like Tyndall are in a difficult situation, trying to get the public to pay attention to such an abstruse subject as climate change without talking about the one phenomenon that could concentrate people's minds more quickly than anything else. Presumably the reason they don't mention 'chemtrailing' is that it could be construed as illegal and they themselves implicated in it. They act as if they are frightened of the public knowing what they are doing (or at least advocating). But they have no reason to be frightened of the public. What they need to be frightened of is the political system, those that operate its levers, and the way they make the public act. If they could establish direct contact with the public, or with people such as ourselves who presumably seek to represent the public, bypassing the political/media system, things would be much simpler for them. But how can they do that when the political/media system is their main communication channel with the public?

None of this implies that climate mitigation is the whole story with 'chemtrails'. But it is the only part of the story where you have these people on the other side who may be susceptible to discussion as equals owing to the notion that 'this is being done for our own good'. It is the weakest point in the wall of disinformation and silence, and who knows, securing the co-operation of climate scientists might be the way to find out more about the aspects of the activity that are NOT explicable as climate mitigation.

That is something unfortunately neglected by [Clifford Carnicom](#) and others, who seem to think the first priority is to show how climate mitigation is not a plausible explanation for 'chemtrails', ignoring the factor of the possible self-image and self-justification of people (like the late 'Deep Shield' [who committed suicide in September 2004]). As many others have done, Dr. Sarah Cornell uses the implausibility of aerosol spraying as a means of climate mitigation to *argue that it is not happening so that we should ignore the evidence of our senses*. Absurdities like this derail dialogue. We have to make sure that it doesn't derail dialogue for us also.

As a group we have the advantage of possessing a wide spectrum of views, some even apparently overlapping with the positions being adopted publicly by climate scientists. This should strengthen our claims as alternative interlocutors to representatives of the political/media complex, who will always approach climate scientists either in a spirit of complicity as fellow-conspirators against the public or as inquisitors in search of scapegoats. Both of these must be unnerving prospects, reinforcing the ivory-tower reflexes of scientists.

Perhaps the fear is that acknowledgement of 'chemtrails' will trigger an avalanche of private litigation. But even if it is arguable that private interests must sometimes be overridden for the greater good of society, can it be said in the same way that public health and the integrity of the natural environment must also take second place to some more urgent priority? What on earth could that priority be? And how can there be justification for removing this question from public scrutiny?

What really has to change is the behaviour towards 'chemtrails' activists and anthropogenic climate change skeptics respectively. Though critical of the dwindling number of corporate-funded scientists still seeking to deny the reality of anthropogenic climate change, the media – ostensibly in the name of pluralism – still reserve a role of controversial opponent for climate change skeptics. *But there is no correspondingly pluralistic attitude when it comes to 'chemtrails' activists, who are ignored, disdained, stigmatized, in short given no role at all in the debate, not even the role of pointing out the absurdity of the geoengineering pseudo-solutions to climate change.* This is a role the climate scientists reserve for themselves, presumably owing to fear that things will get out of their control if they allow the task of criticism to be delegated to anyone else. *We are thus presented with the weird*

spectacle of seeing scientists advocating measures which they simultaneously ridicule and deny are being implemented.

And the situation is out of their control anyway because the fossil fuel and nuclear power lobbies are still calling the shots.

The Jekylls and Hydes of climate change have to date followed conflicting trajectories: the former for the most part unaware of the existence of the latter; the latter filled with seething resentment against the former. Both have been more prone to issuing demands than asking questions. Respectable climate change activists have demanded reductions in carbon dioxide emissions, at least to the extent required by the Kyoto guidelines, along with incentives for transition to renewable energy sources. 'Chemtrails' activists have been demanding an end to secrecy and denial, and – more desperately – an end to the activity whose reality is officially denied: i.e. illegal spraying from aircraft of huge areas of the planet with toxic substances.

The first step required for Dr. Jekyll and Mr. Hyde to become an integrated entity is that the demands give way to a question: "Is the spraying of substances from aircraft an acceptable answer to the problem of climate change?"

The mass media's, the politicians' and climate scientists' answer to the question has so far been: "No, it isn't, and it isn't happening!"

Civil society's and climate scientists' answer to the question must become: "No, it isn't, and it *is* happening."

As someone whose political apprenticeship was served in the non-aligned anti-nuclear weapons movements of the nineteen-eighties, I went through the experience of seeing 'civil society' in Eastern and Western Europe demobilized after the fall of the Berlin wall, having served its purpose of overthrowing Communism. The European anti-nuclear movement, presented with the opportunity in 1991 to demand abolition not just of the Soviet nuclear weapons in Ukraine, Kazakhstan and Belarus but also those in Russia, failed to avail itself of this opportunity. The powerful constituency in both Eastern and Western Europe that had been brought together to put an end to the Cold War system of nuclear terrorwas abandoned and left to its own devices.

There can be no excuse for continuation of the demobilization today when the possibilities for unleashing civil society against the OTHER superpower have never been better.

APPENDIX: Extracts from Ross Gelbspan's 'The Heat is On': 'A scientific critique of the Greenhouse Sceptics'.

Tom Wigley (senior scientist at the National Centre for Atmospheric Research, responding to Congressional testimony from greenhouse sceptic Dr. Patrick Michaels):

"The latest projections available at the time of Michaels's testimony (Kattenberg et al, 1996) are for a global-mean warming over 1990-2100 of around two degrees Celsius, with an extreme range of 0.8 degrees C-4.5 degrees C. While it is true that these results are slightly smaller than the projections given by the IPCC in 1990, the important thing to note is that they are not directly comparable with these earlier results. This is because the 1990 results were based on different emissions scenarios, scenarios that differ markedly from the 1992 emissions scenarios. The 1992 emissions scenarios,

furthermore, now include sulphur dioxide emissions, which lead to the production of sulphate aerosols with, in most cases, an attendant cooling effect (albeit relatively small).”

“Another misconception that Michaels propagates is the idea that some radical change has been made in the performance of the Hadley Centre model between 1990 and now. This, too, is wrong. The model

has been changed, but not in any way that is relevant to the debate. The most important change that has occurred has been not to the model but to how the model is forced (viz., now including aerosol effects).”

“It is true that calculations published in the 1990 IPCC report gave larger warming amounts than the latest values, but there are no qualitative differences. The differences do not arise from any change in models or in our understanding of the climate sensitivity. Rather they arise from the use of different forcing scenarios for the future. The earlier projections were based on different emissions scenarios. They are not directly comparable with the latest results because of this and because aerosol effects were ignored.”

Similarly from **Jerry Mahlman**, director of NOAA's Geophysical Fluid Dynamics Laboratory at Princeton University and chair of NASA's Mission to Planet Earth Scientific Advisory Committee:

Question: “What are the reasons that the IPCC projections of global warming appear to have come down somewhat?”

Jerry Mahlman: “The sulphate offset of greenhouse-gas-induced warming is the reason for the lowered IPCC warming projections. Michaels and a few others seem to think that a cooling effect somehow lowers the sensitivity of the climate to increased greenhouse gases. I cannot find any logic in such assertions.”

Final comment from W.H.

It seems that aerosol operations (including what we call ‘chemtrails’) have been effective in mitigating some of the symptoms of climate change. Anthropogenic climate change sceptics have taken advantage of this ‘success’ of their opponents to reinforce their own assertion that anthropogenic climate change is not occurring!! If the aerosol operations were conducted with full transparency and full cognizance of the public, trickery of this kind would be impossible because the relations between cause and effect would be obvious. But as things are, the lies are mutually self-reinforcing. The deceit that no deliberate spraying of aerosols is in progress strengthens the deceit that anthropogenic climate change is a myth. How many climate scientists worry about the fact that by concealing mitigation activities they strengthen the hand of ‘greenhouse sceptics’, i.e. climate change debunkers.

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