



Keith Kahn-Harris

Unreasonable doubt

Attacks on scientific consensus employ the simulacra of scholarship and a deceptively readable idiom. Those who debunk the deniers tend to be old-fashioned rationalists or committed activists. Neither group are particularly well suited to looking at the deeper reasons behind denialism, warns Keith Kahn-Harris.

It wasn't supposed to be like this. We were supposed to be living in a world in which the methodical, rational, scientific accretion of knowledge would lead us down a path to a better world. That was the dream of Enlightenment, the bedrock of modernity.

But much has happened to challenge this dream. One doesn't have to agree with Theodor Adorno or Zygmunt Bauman that the Holocaust was the apotheosis of an inhuman Enlightenment rationality to recognise that scientifically grounded bureaucracy can be used to control and slaughter millions. One doesn't have to be a radical environmentalist to recognise that, from Thalidomide to DDT, the fruits of scientific progress can lead to horrendous unintended consequences. One doesn't have to be a Richard Dawkins to observe the continued flourishing of religious fundamentalism and conclude that enlightenment has failed to take hold in many parts of the world.



But one of the most serious failings of a rational, scientific enlightenment is its propensity to be turned against itself, as when a firm scholarly consensus is attacked in the name of scholarship. You can find this subversion of

enlightenment in quasi-academic claims that there was no Holocaust during World War Two, that other genocides such as the Armenian genocide never happened, that man-made climate change is a myth, that HIV does not cause AIDS, that evolution is a lie. More broadly, you can find it in the attempts of vested interests — industries, politicians and elites — to refute inconvenient scientific findings.

While none of these campaigns has yet managed to completely overturn the consensus they target, they have had some significant victories: the Holocaust is negated in much of the Islamic world and this helps to harden

extremist attitudes to Israel; refutation of the Armenian genocide has helped to ground the more chauvinistic sides of Turkish nationalism; the rejection of mainstream AIDS science found official support in Thabo Mbeki's South Africa and retarded the necessary use of retrovirals; "climate scepticism" in the US helped to prevent action on climate change during the Bush administration; creationism and intelligent design are orthodoxies in much of America.

I'm talking here about the problem of denialism. Denialism is the systematic, institutionalised attempt to deny a firm consensus established by scholarly, scientific enquiry. The term's origins are obscure, but it has come to be widely used especially within the blogosphere to describe a collection of organised campaigns of denial.

Denialism has a long history. One can trace its roots back to phenomena as various as nineteenth-century "zeteticism" that attempted to prove the earth was flat, King Leopold II's attempts to foster defences of Belgian colonialism in the Congo at the turn of the century and more recently to the tobacco industry's post-war campaign to undermine the scientific consensus on the harmfulness of smoking. The naming and recognition of the phenomenon of denialism received considerable impetus from the George W Bush presidency and his administration's support for global warming denialism and more generally from what Chris Mooney called in his book of the same name the "Republican war on science".

Denialism is not simply the knee-jerk refusal to accept the truth, it is a deliberate and often sophisticated attempt to create a kind of simulacrum of scholarship — what Erik Conway and Naomi Oreskes call in their book *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* "scientific Potemkin villages". Denialism uses the panoply of scholarly apparatus — footnotes, journals, institutes — and as such is a kind of backhanded tribute to the prestige of Enlightenment scholarship. Denialists and their detractors are united in their respect for the power of science and scholarship to persuade.

A problem soon arises, though, when the term denialism is stretched too far, when it is used to reduce the possibility for debate. Michael Spectre in his recently published *Denialism: How Irrational Thinking Hinders Scientific Progress, Harms the Planet, and Threatens Our Lives* runs this risk in his treatment of campaigns against vaccination and GM food as well as activism for alternative medicine as forms of denialism. While there is pseudo-science in all these areas, there are legitimate doubts to be raised about aspects of western medicine and biotechnology and many of those who fall into Spectre's denialism camp are at least initially motivated by reasonable concerns. Similarly, Thabo Mbeki's AIDS denialism was arguably initially motivated by legitimate reservations about the pharmaceutical industry, though it continued long past the time these concerns had been addressed, with devastating effects on AIDS sufferers in South Africa. But There can be something oppressive and undemocratic about reducing disagreement — however irrational or ridiculous — to denialism. This raises difficult questions about the political and analytical utility of denialism as a concept.

Sociologist Stanley Cohen is one of the few scholars to have thought systematically about this issue. Currently working on a new introduction to a revised version of his book *States of Denial: Knowing About Atrocities and Suffering*, Cohen has serious qualms about the way in which knee-jerk accusations of denialism have become used as a way to silence legitimate

argument, and to suggest that there is equivalence between these very different debates — for example between the Holocaust and climate change. "The global warming case," he told me when I spoke to him, "is one where the existence of different sides to the argument does not in itself seem to be totally stupid. Global warming is not a phenomenon which has the same empirical validity as the Holocaust and it can't. One is an established historical fact, the other a debate about possible future outcomes. That's why there is some legitimate room for discussion. The science does need to be put under sustained scrutiny, and things like the East Anglia emails do create doubts in people minds, which should be addressed. That's not the case with the Holocaust. You are not going to find an email from Himmler saying there were no concentration camps and overturn the historical consensus."

While he doesn't deny the seriousness of global warming, Cohen does suggest that other social problems that are routinely ignored are of equal or even greater importance: "People say that if you don't agree with their ranking of social problems you're in denial. I've seen the argument that global warming is the most serious challenge of the twenty-first century. Global warming has completely co-opted and colonised the whole question of ethics. *The Observer* had a colour supplement called 'ethical living' and what is ethical living? Putting your computer on standby. That's not ethics! Sometimes I feel myself like being a denier, being in agreement with some of the denialist critiques of the excesses of the rhetoric." What gets lost in claims and counter claims about denialism, for Cohen, is a sense of proportion. "Measles kills more children in Southern Africa than the Holocaust did, but no one is saying this. And no one is denying it either. We are all just looking away." It is this "hinterland", where things are neither acknowledged nor denied, merely ignored, where denial in the Freudian sense is one of the key mechanisms at work, which is central for Cohen and he worries that a focus on denialism is a distraction from this more vital area.

Cohen's argument cautions us against the self-righteousness that can sometimes accompany the "debunking" of denialists. But surely it is still necessary to make distinctions between genuine scientific and factual arguments, and those arguments which seek to question well-established scientific consensus for ideological ends. To use Cohen's example of measles, questioning the efficacy of vaccination, in the face of clear medical evidence, is a regular denialist tactic, and these arguments need to be properly dispatched as, for example, Andrew Wakefield's now discredited arguments that the MMR vaccine caused autism were properly exposed by the Guardian's "[Bad Science](#)" columnist Ben Goldacre. How else do we describe such arguments other than as "denialism" — where denial is the unwillingness to look the truth in the face, denialism is a systematic strategy of misinformation. The "ism" indicates the conscious attempt to fool the public into thinking that there is a scientific debate, where none exists.

Fighting denialism is as difficult a task as unravelling the complexities of the human psyche. Perhaps the most important response to denialism is to ensure that scholarship is conducted to the highest standards. The UEA climate change email scandal shows the devastating effect on scientific reputations when legitimate scientists cut corners. But getting one's own house in order and ensuring that legitimate scholarship proceeds in an exemplary fashion is only the start of the process. Much more difficult is the question of how to respond to denialist arguments.

At the frontline of the struggle are the "debunkers" who work to refute denialists' claims. The indefatigable work of the likes of Michael Shermer, founder of the Skeptic society in the US and editor in chief of Skeptic magazine, Ben Goldacre in the UK and a myriad sceptical blogs have ensured that denialist claims are continually and rigorously challenged.

One of the most valuable services that debunkers have performed is to have identified techniques that are used repeatedly by denialists in fields as unrelated as medical science (AIDS denialism) and history (Holocaust denial). A useful example of this is Mark and Chris Hoofnagle's list of "five general tactics used by denialists to sow confusion" at denialism.org (with a brief example of mine in brackets):

- Conspiracy (eg: "the Mossad organised the 9/11 attacks to gain support for Israel")
- Selectivity (cherry-picking)(eg: focusing on the growth of glaciers in some inland Greenland locations, ignoring the wider loss in glacier ice and the fact that global warming theorists predicted glacier growth inland)
- Fake experts (eg: Fred Leuchter's "report" on the gas chambers at Auschwitz that claimed to refute the use of Zyklon B to kill Jews — Leuchter is an execution technician with no forensic training)
- Impossible expectations (also known as moving goalposts) (eg: the lack of "transitional fossils" bridging the gaps in the evolutionary record is proof that the theory of evolution is incorrect)
- General fallacies of logic (eg: the failure to develop an AIDS vaccine is proof that AIDS does not exist).

Denialists not only share similar techniques, in many cases the same denialists are active in more than one area. In their impeccably researched genealogy of denialism Merchants of Doubt, Conway and Oreskes show that a key group of figures in global warming denial earned their spurs in tobacco–industry–funded attempts to discredit the links between smoking and cancer. The "tobacco strategy" has been applied to "a laundry list of environmental and health concerns, including asbestos, secondhand smoke, acid rain and the ozone hole" and now to global warming. A small group of free–market fundamentalist scientists such as Fred Singer and the late Fred Seitz jumped between thinktanks and lobby groups in order to manufacture doubt on scientific consensus, smearing other expert scientists while doing no original research themselves. Even if they never managed to totally overturn the science — how could they, given that they offered no alternative explanations for the findings whose meanings they contested? — they did succeed in creating the impression among media and policy–makers that the science was not settled, that there was debate where there wasn't.

The links that Conway and Oreskes reveal between various American environmental and health denialisms demonstrate that once individuals cross the Rubicon into one form of denialism, it's easy enough to embrace others. Examples abound of "multi–deniers" such as the Revolutionary Communist Party/Living Marxism group in the UK (now centred around the [Spiked website](#) and the [Institute of Ideas](#)), many of whose adherents have denied everything from anthropogenic climate change, the Bosnian and other genocides, to the idea that it is dangerous to fly in a cloud of volcanic ash. Denial of evolution goes very well with denial of global warming. Denial of the Holocaust is often associated with denial that the 9/11 attacks were carried out by al–Qaeda. Once the techniques of denialism have been learned, what results is a strange kind of parallel world in which denialism becomes

legitimate scholarship and mainstream scholarship becomes a perversion of truth. The cod science of denialism is picked up and disseminated by allies in the mainstream media, like *Daily Mail* columnist Melanie Phillips, keen to push their own version of truth and criticise what they see as the sanctimony of liberal culture.

The debunking literature demonstrates both that it is possible to utterly obliterate the credibility of denialist scholarship and also that doing so raises its own problems. Howard Friel's recent book *The Lomborg Deception: Setting the Record Straight About Global Warming* highlights these problems. Friel's book takes issue with self-styled "Skeptical Environmentalist" Bjørn Lomborg, author of a best-selling book of that name, who has been treated as a credible and important figure in the global warming debate. Lomborg does not deny that man-made climate change is occurring; his argument is that its consequences will be much less severe than predicted and that money spent to combat it would be better spent on other more important causes.

Lomborg's work is replete with scholarly paraphernalia — *The Skeptical Environmentalist* has over 3000 footnotes. Howard Friel carefully dissects Lomborg's claims and combs through his sources and how he represents them. The results are shocking. Not only do many of his footnotes fail to provide any scientific proof for his claims, but he systematically misrepresents those studies that he cites in support. (Contrary to most experts on the subject, for example, Lomborg argues that Arctic polar bear populations are actually increasing.)

It is here though that another problem in disputing denialism becomes apparent. Friel's debunking of Lomborg involves a minute and careful examination of the sources he uses. This is a time-consuming task that requires considerable skill and fortitude. Whereas Lomborg's work communicates its arguments clearly, the arguments in *The Lomborg Deception* are detailed and technical. Debunking arguments are by their very nature complex — you need to know the science, which is often complex, and communicate this to the reader as well as be able to show why the denialist arguments are wrong — and debunking is difficult for "amateurs" to do. However outrageous the claims that deniers make might be, they are dangerously persuasive in their accessibility.

In any case, the debunking of denialism is often of only limited use. While it is important that denialism does not go unchallenged, it is nevertheless largely impervious to that challenge. It may be that the open-minded person looking for answers will be convinced by the debunker rather than the denier, yet deniers and those convinced by them are by their very nature not open-minded people looking for answers. Denialists rarely recant, although they sometimes give up the struggle — the Holocaust denier Mark Webber, founder of the Institute for Historical Review, recently conceded that his movement had made little headway and it was better to focus on fighting "Jewish-Zionist power". Debunkers and denialists find themselves in a mutually created trap. Neither side can convince the other, they both find themselves desperately fighting for the support of the uncommitted. Both sides are convinced of the value of science and scholarship to support their cause.

Denialism also arises from the pitiless speed of modern life. In *Denialism* Michael Spectre argues that the rapid pace of scientific progress, together with well-known examples where science has got it wrong, has led to an irrational fear of science. For Spectre, then, denialism arises from a misplaced desire to

deal with this fear by rejecting scientific progress and enquiry.

The intractability of denialism can drive activists and scholars to despair. In an [article](#) in *The Guardian* in March this year, [George Monbiot](#) mournfully concluded: "Perhaps we have to accept that there is no simple solution to public disbelief in science. The battle over climate change suggests that the more clearly you spell the problem out, the more you turn people away. If they don't want to know, nothing and no one will reach them. There goes my life's work."

This despair may be understandable, but it reveals the limitations of the approaches used in the fight against denialism. Those who fight denialism tend to be either rationalistically minded debunkers or committed activists. Neither group are particularly well suited to looking at the deeper reasons behind denialism.

The Australian environmentalist Clive Hamilton, in his new book *Requiem for a Species: Why We Resist the Truth About Climate Change*, locates denial in our deepest hopes and fears. Hamilton's starting point is that, with the failure of the 2009 Copenhagen summit, effective action against climate change is now almost impossible. He places the blame not simply on denialists, but on a wider denial present even among those who accept the truth of anthropogenic global warming. Global warming demonstrates that the entire way we live in the modern world is unsustainable and will have to be radically rethought. This is simply too disturbing for most of us to accept and we fall back on the hope that relatively minor actions (such as green consumerism) can save us and that climate change will not be too terrible anyway: all of which, Hamilton argues, constitutes an almost species-wide denial.

Which brings us back to Stan Cohen. He thinks the preoccupation with debunking denialists is part of the problem: "You get the impression from reading the debunking literature that these people are not aware of the last 30 years in the social sciences. They see themselves as old-fashioned rationalists. They're often actively hostile — they are themselves naive." Instead Cohen thinks we need "to find a path between a radical relativism that doesn't allow for any notion of truth and an old-fashioned commitment to the only truth."

Published 2010-05-25

Original in English

Contribution by New Humanist

First published in New Humanist

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