5.1 Evangelical Interventions

Behind the conservative backlash against acknowledging the reality of global warming was E. Calvin Beisner, PhD, who is the national spokesman for the Cornwall Alliance for the Stewardship of Creation, which he founded in 2005. The Alliance promotes the right-wing principle of Wise Use through its mission 'to enhance the fruitfulness, beauty, and safety of the earth to the glory of God and the benefit of our neighbors'. Beisner's views are worth considering because they perfectly exemplify the extreme conservative take on climate change.

In 2009 the Cornwall Alliance issued an 'Evangelical Declaration on Global Warming', which declares as an article of faith ('What We Believe') that Earth's climate system, sustained as it is by God's 'faithful providence', is 'robust, resilient, self-regulating, and self-correcting, admirably suited for human flourishing, and displaying God's glory'. And since it's going to stay that way (how do they know that?) there *can be no* adverse effects from global warming.

The Declaration has been signed by a few climate scientists (deniers drawn from the 1 percent), and so it frames the issue in the less dogmatic terms of history and science: 'Recent global warming is one of many natural cycles of warming and cooling in geologic history.' But of course the science tells us that the recent warming is far from natural, and is being caused by human activity. Everyone knows that—except for those conservative evangelicals whose faith dictates in advance what they can know and not know.

The Declaration denies, ex cathedra, 'that the Earth's climate system is vulnerable to dangerous alteration because of minuscule changes in atmospheric chemistry'. This reassuring denial sets up the conclusion: 'There is no convincing evidence that human contribution to greenhouse gases is causing dangerous global warming.' The climate scientists who signed are well known for being blind to the evidence for human-caused global warming because their faith tells them in advance that the climate system, created by God, is perfectly 'self-regulating and self-correcting'. Accordingly, the document ends with a 'Call to Action', which urges political leaders 'to adopt policies that protect human liberty ... while abandoning fruitless, indeed harmful policies to control global temperature'. ² Fruitless because the human power to change the composition of the atmosphere is nothing in relation to God's omnipotence, and harmful to the poor.

In spite of the Beisner backlash the National Association of Evangelicals convened a meeting with the Center for Health and the Global Environment at Harvard Medical School in 2007. A discussion between scientists and evangelicals uncovered a surprising amount of common ground: they shared (with the folks at the Cornwall Alliance too) 'a concern for the poorest of the poor, well over a billion people'—but they also agreed that climate change was an urgent problem that 'the nation's leadership' has to address (along with habitat destruction, pollution, species extinction, etc.). All in all, they warn, 'we are gradually destroying the sustaining community of life on which all living things on Earth depend'. (Among the scientists signing were James Hansen and E. O. Wilson.)³

Then the Alliance strikes back, with a powerful battery of ideas from theology and philosophy: 'A Renewed Call to Truth, Prudence, and Protection of the Poor: An Evangelical Examination of the Theology, Science, and Economics of Global Warming' (2010), and 'The Biblical Perspective of Environmental Stewardship: Subduing and Ruling the Earth to the Glory of God and the Benefit of Our Neighbors' (2013).⁴ The ideas are fundamentalist, hard-core, and revelatory.

Article 2 of the Biblical Perspective claims that the Bible 'is the sole, absolute, inerrant epistemological basis for mankind for all knowledge of all things, seen and unseen, and that all claims of truth and moral duty that contradict it are false and harmful.' And for anyone who's wondering what kind of claims of truth these might be, the next sentence leaves no doubt: 'We deny that the physical universe and human observations of it justify truth claims contrary to those of the Bible'. This is an unusual epistemology—claims to knowledge made by natural scientists are valid only when they don't contradict the Bible (understood as a text that makes truth claims)—but let's see how it works.

From Beisner's Biblical perspective, God is 'absolutely distinct from and transcendent over creation, which He rules at all times and places', and so any kind of pantheism or animism is to be abhorred, since those worldviews confuse the absolute difference between the Creator and 'the creature' (article 3). Conservative evangelicals are so adamant about this difference, regarding worshipping the Creation as heresy, that they tend to neglect the value of nature as created by God. And because, for Beisner, 'the Earth and all its physical and biological systems are the effects of God's omniscient design, omnipotent creation and faithful sustaining', the system cannot possibly be 'susceptible to catastrophic degradation from proportionally small causes' such as emitting a few greenhouse gases into the atmosphere. This is because 'by God's design Earth and its physical and biological

systems are robust, resilient, and self-correcting' and so anything but 'fragile' (8, 9).

We know that these features of the Earth system will continue to operate because of God's covenant, 'in which He proclaimed, after the Flood, that He would sustain the cycles on which terrestrial life depends for as long as the Earth endures' (19, a reference to Genesis 8:22). Christian climate deniers take this to mean that until the Day of the Lord, when 'the earth and the works that are therein shall be burned up' (2 Peter 3:10), God will ensure that nothing (like global warming) will disturb the natural cycles of the climate.

Back in 1970, when the evangelical theologian Francis Schaeffer responded to Lynn White's criticism of mainstream Christian thought as anthropocentric and un-ecological, he emphasised the duty of stewardship of nature as God's creation, and that 'it is not ours'. Rather 'it belongs to God, and we are to exercise our dominion over these things not as though entitled to exploit them, but as things borrowed or held in trust.' Not only are things of nature not ours: as part of the Creation they are intrinsically valuable in themselves, and thus deserve to be treated with respect. But, as Schaeffer writes, 'because he is fallen, man exploits created things as if they were nothing in themselves, as though he has an autonomous right to them.'5

This is an apt criticism of Beisner's Biblical perspective on stewardship. For Beisner, we know that 'God placed minerals, plants, and animals in and on the Earth for His pleasure, to reveal His glory and elicit man's praise, and to serve human needs through godly use', and that therefore 'one way of exercising godly dominion is by transforming raw materials into resources and using them to meet human needs' (14, 15). Beisner is careful to include minerals *in* the Earth, because among the raw materials he has in mind are fossil fuels. Stewardship from the Biblical perspective is heavy duty—as he said in an interview with Bill Moyers: to exercise full dominion over the earth, which includes 'mining for precious metals and fossil fuels', requires a bit of 'forceful rule'. Doing violence, you could say, to things borrowed or held in trust.

Because Beisner is in favour of private property and private ownership of land, free market economies, and cost/benefit analysis, he dismisses environmental policies that oppose 'the use of abundant, affordable, reliable energy sources like fossil fuels in the name of fighting global warming'. Such policies 'address relatively minor risks' on a cost/benefit analysis, and at the same time 'constitute oppression of the world's poor'. The man's dogmatic insistence on his own infallible knowledge is dangerous.

The conceptual framework of the Biblical perspective is shaky, unless you believe with Beisner, because it's grounded in a belief that the Bible 'is the sole, absolute, inerrant epistemological basis for all knowledge of all things'. As he explained to Bill Moyers, it's a matter of 'the knowledge for certain that if I were to die, today, I would go to Heaven, and not to Hell. ... The Bible tells us, that these things have been written to you ... so that you can *know* that you have eternal life.' This conviction leads Beisner to a strange understanding of geophysics and climate science: because he believes that 'God controls all things', phenomena like volcanic eruptions and 'global warming and global cooling are the expression of God's will'.

Furthermore, Beisner takes God's cursing the ground after Adam and Eve ate the forbidden apple (Genesis 3:17) to mean that 'sometimes environmental devastation is God's judgment on human sins'. Yet it never occurs to him to think that extreme weather events, which scientists are attributing with growing confidence to global heating, might be retribution for the destruction that human beings have been inflicting on the Creation. He is happy to ignore the passage in the Book of Revelation, a book he otherwise likes to cite, where the four and twenty elders thank the Lord for 'destroying them which destroy the earth' (Revelation 11:18).

The most unsettling episode in the Bill Moyers interview comes at the end, when he asks Beisner, 'What if you're wrong about global warming?' Beisner replies (seeming to concede that he might not after all *know*): 'If I'm wrong ... then we're going to have troubles, and I'll be very sad about that.' Moyers then reminds him: 'As you said at the beginning of this interview, you're a saved man; Heaven awaits you, whatever happens here on earth.' Beisner: 'Well, yes. Nothing else begins to compare with the importance of Jesus Christ and him crucified.' His final remarks suggest that the destruction of large parts of Creation (human beings and things of nature) through global heating is indeed nothing by comparison. And the implication is that in any case he, Beisner, has 'the knowledge for certain' that he's headed for eternal life in Heaven, and so he won't stay sad about the 'troubles we're going to have' for long.9

This is the most disturbing feature of conservative evangelical belief: the idea that natural disasters, extreme weather events, and environmental devastation are signs that we're approaching the 'End Times', or *eschaton*, which will see the Second Coming of Christ and ultimately a New Heaven and a New Earth (an event that Dr Beisner looks forward to). ¹⁰ According to the 'dispensationalism' of John Nelson Darby, which informs the worldview of many American fundamentalists and conservative evangelicals today, true believers will leave their earthly lives and be 'raptured up' to Heaven. This event marks the beginning of the end: 'the final sequence of

events will unfold with dismaying rapidity for those left behind, beginning with the seven-year rule of Antichrist and the Apostate Church, the so-called Tribulation (Matt. 24:21), of which the second half will be sheer hell.'11

Many Americans appear to share Dr Beisner's faith in personal salvation and consequent lack of concern about the climate crisis. When a Gallup poll in 2005 asked people 'Would you describe yourself as a "born again" or "evangelical"?', a staggering 47% replied Yes. The Pew Research Center, asking a narrower question (Are you an evangelical *Protestant*?), found that in 2007 and 2014 the percentage was a little over 25%. That's still 80 million people, making evangelical Protestants the largest single religious group in the US. A study of religious affiliation and concern about climate change in 2015 came to an expected conclusion:

Individuals that affiliate with an Evangelical Protestant church, all else equal, are less likely than both Mainline and Protestant churches to be worried about climate change. ... Individuals in religious traditions that are more prone to teach biblical literalism are less likely to express high degrees of concern about the environment.¹²

A major contributor to this situation is Rush Limbaugh, who 'day in and day out' says of global warming 'This is a hoax, this is BS'. Limbaugh spouts falsehoods that he doesn't retract when they're shown to be false, peddles all kinds of conspiracy theories, and consistently denies the findings of the sciences. 'My views on the environment,' he tells us, 'are rooted in my belief in Creation.' He believes that God made Creation indestructible, so that 'we couldn't destroy the earth if we wanted to.' It's hard to understand how people can buy in to Limbaugh's 'assault on reason' and his unsubstantiated rejection of the reality described by science—until you recall that so many work 'in headphone radio space, that bubble of radio reality' and hear this kind of nonsense for several hours a day.

People are of course free to believe whatever they like about climate change, but the beliefs of the conservative evangelicals become problematic when they try to bring American society into line with those false beliefs—something that people like Beisner and Limbaugh enthusiastically encourage. But it also seems as if the problem is not with evangelical Christianity per se, but with *conservative* faith in any Christian denomination.¹⁴

Katharine Hayhoe, for example, is an atmospheric scientist and a professor at Texas Tech University, where she co-directs the Climate Science Center. She is also an evangelical Christian who finds no contradiction between studying God's Creation as a scientist and understanding that human-caused climate change will have a range of nasty

consequences. As a Christian she calls for action on global warming especially because it will hit the poor and vulnerable the hardest.

Unfortunately many of her co-religionists appear not to share her compassion: she is regularly and viciously attacked by 'conservative Christians' in the US, 'via email, Twitter, Facebook comments, phone calls and even handwritten letters'. One example from the two hundred or so messages she receives after appearing in the media: 'I hope your child sees your head in a basket after you've been guillotined for all the fraud you climate scientists have been committing.' These people apparently missed Jesus's message about loving one's neighbour.

Someone else who missed this, and appears to share Beisner's view of God and the world, is the most prominent Christian soldier on the climate front in the Republicans' Holy War on science: Senator James Mountain Inhofe.

5.2 'Soon and Baliunas 2003'

Scientific publications are continuously beset by cranks, frauds and bunglers whose contributions must be rejected. Michael Polanyi¹⁶

It's a sad irony that one of the most 'impactful' scientific articles of the early twenty-first century, SB 2003, should be fatally flawed. For a start, neither Soon nor Baliunas is a climate scientist, and their research was funded by the American Petroleum Institute, so a dose of scepticism is in order. Global warming deniers like to refer to this article as the 'Harvard Smithsonian Study', presumably to add some needed cachet, but that's a pretty loose designation.

Sallie Baliunas was an astrophysicist at the Harvard-Smithsonian Center for Astrophysics, but with no background in climate science, while Wei-Hock 'Willie' Soon is an aerospace engineer and part-time 'Smithsonian staff researcher', as a spokesman for Harvard carefully put it. But then more definitely: 'There is no record of Soon having applied for or having been granted funds that were administered by Harvard. Soon is not an employee of Harvard.'¹⁷ Almost all the scientists at the Center for Astrophysics are funded by NASA, the Smithsonian, or the National Science Foundation, whereas Willie Soon is among the one per cent who are funded privately.

SB 2003 is a 21-page review of some 240 scientific studies of proxy data concerning the climatic history of the last millennium, using instead of temperature measurements proxies such as tree rings, ice-cores, and ocean sediments. To get the paper published the authors had to send it half-way

around the globe to a sympathetic scientist in New Zealand who was an editor for *Climate Research*, a relatively obscure journal owned by a publisher in Germany. This editor, Chris de Freitas, was known for reassuring the public that human activities aren't responsible for global warming. 'Warming does not confirm that carbon dioxide is causing it,' he wrote in the *New Zealand Herald*; 'Climate is always warming or cooling. There are natural variability theories of warming.' Naturally he accepted the Soon and Baliunas article, and it was published in January 2003. The acknowledgments at the end begin: 'This work was supported by funds from the American Petroleum Institute.' 19

While the funders will have been delighted by the authors' conclusion, the scientific community rejected it resoundingly. Even the publisher of *Climate Research* admitted that SB 2003 generated 'an unusual amount of correspondence from scientists who criticized the methods used by Soon and Baliunas', and that the journal 'should have been more careful and insisted on solid evidence and cautious formulations before publication.'²⁰

When a writer for *The Chronicle of Higher Education* contacted scientists whose work SB 2003 had cited, he was told, 'Many people feel betrayed by the misrepresentation of their data'. A scientist at Columbia complained: 'It displays some ignorance, putting my sediment record in there to address that question.' Another cited scientist summed it up perfectly: 'I think *they stretched the data to fit what they wanted to see*.'²¹ This is exactly what they did, and their method is a perfect example of the way the contrarian scientists operate: they assume in advance that humans aren't responsible for global warming, and then ransack the records for bits and pieces of data that will support that conclusion. Exactly the opposite of the way things are done in the Republic of Science.

Four months later Soon and Baliunas published an expanded version of SB 2003 under the title 'Reconstructing Climatic and Environmental Changes of the Past 1000 Years: A Reappraisal' in a journal called *Energy and Environment*.²² Perhaps because it's unheard of to publish two versions of the same scientific paper, they added the names of three co-authors: Craig Idso, Sherwood Idso, and David R. Legates.

In a 2012 survey of journals in the field of environmental studies, *Energy and Environment* was ranked 90 in a field of 93. (You wonder whether the publication of 'A Reappraisal' was a factor.) According to its mission statement, the journal's aim is to

debate the ... implications of environmental controls, as well as to interrogate the science claims made to justify environmental regulation of the energy industries. ... The editor has made E&E a forum for more sceptical analyses of 'climate change' and the advocated solutions.

At least they get top marks for sincerity. When the editor was questioned about the publication of the 'Reappraisal' article, she admitted, 'I'm following my political agenda—a bit, anyway. But isn't that the right of the editor?' Right, yes.

Two criteria for good scientific research are peer evaluation (peer review before publication and positive reviews after) and the stature of the journal that publishes the research results. SB 2003 doesn't even begin to qualify on either of these measures, and the same goes for the expanded version. Conversely, an occasion to *question* the quality of scientific research is when it's funded by organisations (like the American Petroleum Institute) that have a financial interest in its outcome.

When journalists questioned the impartiality of SB 2003 because the research had been supported by a grant from the American Petroleum Institute (the expanded version also acknowledges the API), the inveterate climate denier Senator James Inhofe responded that 'most of the funding came from federal grants through NASA, the Air Force Office of Scientific Research, and the National Oceanic and Atmospheric Association.' But one of the editors of *Climate Research* who had resigned in protest over the acceptance of SB 2003 did some research of her own—and found that 'NOAA flatly deny having ever funded the authors for such work, and the other two bodies admit to funding them, but for work on solar variability—not proxy climate records'. ²⁴ Inhofe's office staff must have drawn his attention to this contradiction of his claims back in 2003, but the falsehood remained on his website for at least a decade.

The American Petroleum Institute did fund SB 2003, to the tune of some \$100,000. Soon and Baliunas were at that time also paid consultants at the George C. Marshall Institute, which receives funding from ExxonMobil. According to documentation from the Smithsonian, Willie Soon received over \$1.2 million in funding from fossil fuel concerns between 2001 and 2012, and every new grant since 2002 came from the fossil fuel industry or Donors Trust. Among the donors were ExxonMobil, the American Petroleum Institute, the Charles Koch Foundation, and Southern Company, a huge electricity provider that mainly burns coal.

What is more, the Union of Concerned Scientists reports that the Smithsonian 'entered into funding agreements that gave Soon's funders the right to review his scientific studies before they were published', presumably to ensure that they were getting value for their money, and that 'the Smithsonian agreed not to disclose the funding arrangements without the funders' permission'. Accordingly, most of Soon's publications fail to disclose that funding for his research came from the fossil fuel industry.²⁵ But perhaps we should be reassured by his ingenuous protestation: 'I have never been motivated by financial reward in any of my scientific research.'²⁶

Of course not—though you may wonder what motivated Soon's move from aerospace engineering to the even more lucrative field of global warming denial.

As far as the expanded 'Reappraisal' is concerned, Soon's co-authors were all receiving funding from fossil fuel concerns. Baliunas and Legates have held positions (board member, scientific advisor) in various conservative think tanks (the Marshall Institute, the CEI, the Heartland Institute, and Tech Central Station) that are funded by the fossil fuel industry. The Idsos are founder and chairman of the board, and president, of the Center for the Study of Carbon Dioxide and Global Change, which also receives funding from fossil fuel concerns (though it tries, for some obscure reason, to keep its sources secret).²⁷ The complex financial ties can be consulted at ExxonSecrets.org and the UCS report, *Smoke, Mirrors & Hot Air*.²⁸

Six months after the original SB 2003 was published, twelve climate scientists (most of whom had been cited in the article) with Michael Mann as lead author published a devastating rebuttal in *Eos*, the journal of the American Geophysical Union, 'On past temperatures and anomalous late-20th-century warmth'. The authors demonstrate gross methodological errors in SB 2003 and show its claims to be 'inconsistent with the preponderance of scientific evidence'. They conclude by acknowledging that, although there are still minor uncertainties to be reduced and temperature means to be synthesised,

Nevertheless, the conclusion that late 20th-century hemispheric-scale warmth is anomalous in a long-term (*at least* millennial) context, and that anthropogenic factors likely play an important role in explaining the anomalous recent warmth is a robust consensus view.²⁹

When the senior editor of *Climate Research*, Hans von Storch, saw a preprint of this rebuttal of SB 2003 he was dismayed: 'We should say that we have a problem here, that the manuscript was flawed, that the manuscript should not have been published in this way. The problem is that the conclusions are not supported by the evidence presented in the paper.' However, he found that one of his fellow editors had no problem with the paper (de Freitas had after all accepted it for publication) and wouldn't agree to making the review process more rigorous. Concluding that the climate sceptics 'had identified *Climate Research* as a journal where some editors were not as rigorous in the review process as is otherwise common', von Storch resigned from the editorial board, as did several other members.³⁰

I've devoted some time to SB 2003, with its flawed methodology and erroneous conclusions, because of its harmful impact—extraordinary for an

article that appeared in such low-ranking scientific journals. Unsurprisingly the Bush administration just ignored the criticisms and rebuttals by real climate scientists: SB 2003 was saying just what they'd been longing to hear all along, and thus became a basis for their regressive policies on climate change.

In addition to distorting the science to fit their own purposes, the Bush administration began to censor any government scientists whose findings they found troublesome. The abuses became so bad that in 2004 the Union of Concerned Scientists held a press conference for the publication of a statement, signed by over sixty eminent scientists, many of them Nobel laureates, charging the administration with 'manipulating the process through which science enters into its decisions'. The UCS followed up with a forty-page report, 'Scientific Integrity in Policy Making: An Investigation of the Bush Administration's Misuse of Science', which discussed the White House censoring of the EPA report among other abuses.³¹

A thorough accounting of the abuses can be found in a 2007 report produced by the government itself: 'Political Interference with Climate Change Science under the Bush Administration', by the House of Representatives Committee on Oversight and Government Reform. According to the executive summary:

The evidence before the Committee leads to one inescapable conclusion: the Bush Administration has engaged in a systematic effort to manipulate climate change science and mislead policymakers and the public about the dangers of global warming.

Among the conclusions of the Committee's 16-month long investigation were that 'the White House was particularly active in stifling discussions of the link between increased hurricane intensity and global warming', and that they 'sought to minimize the significance and certainty of climate change by extensively editing government climate change reports'.³²

And thanks to the efforts of the rich libertarians, the White House inhabited by Trump is again doing its best to suppress the science and ignore their findings.

5.3 Inhofe, 'Facts and Science': Full Version

As senator for Oklahoma and ranking member of the powerful Committee on Environment and Public Works, Inhofe was prominent in the 1997 crusade, well funded by industry, to prevent the EPA from reducing permitted amounts of ground-level ozone and airborne particulate matter for reasons of public health. Inhofe maintained that the EPA's rules 'do not reflect *good science* or good policy', and that 'the nation needs *further*

study to establish a consensus about what is necessary and appropriate.'33 Although he and his conservative allies failed in this venture, the valiant attempt made Inhofe a favourite of the fossil fuel concerns: between 2000 and 2008 he received \$662,506 from oil companies, making him the number one recipient of oil money in the Senate for that period.³⁴

Two years into the younger Bush presidency, Inhofe was elected Chairman of the Environment Committee. He served a four-year term until 2007—and then returned as Chair in 2015 for another two years. When someone with a thing about the Gestapo controls the most powerful congressional committee concerned with the environment, it's good to know his motivations and ways of operating. He likes to invoke the Nazis, as when he said in an interview of his opponents' strategy: 'It kind of reminds . . . I could use the Third Reich, the big lie.... You say something over and over and over and over again, and people will believe it.'35 But, as we'll see, that's precisely *his* strategy—just like Monckton, whom he admires, and who also likes to characterise his opponents as 'Hitler Youth' and devotees of 'Nazism and Fascism'.36

The two-hour statement that Inhofe delivered on the Senate floor in 2003, when he became the new Committee Chair, would have been torture for anyone who understood climate science to sit through, and a test of endurance for anyone else present. The transcript, which runs to over 12,000 words, is a declaration of war against 'environmental extremists'—as well as a farrago of errors, doublespeak, misrepresentations, and cherry-picked evidence. Climate scientists have been sharply critical.³⁷

Inhofe began by acknowledging the 'profound responsibility' that comes with his new position, 'because the decisions of the committee have wide-reaching impacts, influencing the health and security of every American'. In retrospect, he was being overly modest, since the decisions of his committee had a distinctly *adverse* influence on the health and security of many people in the US—and beyond its borders.

As a maker of environmental policy, he continued, he has always insisted on 'the best, non-political science' and 'sound science', by contrast with the environmentalists. For them 'science is irrelevant: for extremists, politics and power are the motivating forces for making public policy.'38 Again we hear echoes of the Big Tobacco maxim: Our boys do sound science; those guys do junk science. In an article on Christopher Monckton the journalist George Monbiot enumerated the 'cast iron rules of climate change denial', the last of which is this: 'Project your own worst characteristics onto your opponent.'39 As we'll see, Inhofe follows this rule religiously, dismissing or attacking real science and promoting *bogus contrarian* science, while claiming to be doing the opposite.

A revised version of Inhofe's speech later appeared on his website: it begins by stating that 'the climate is constantly changing', which is true, and that 'scientists vigorously disagree over whether human activities are responsible for global warming', which is false. Not only is there a debate, Inhofe says, but 'in fact the balance of the evidence offers strong proof that natural variability is the overwhelming factor influencing climate.' But in fact the vast majority of climate scientists had considered and *dismissed* that possibility long before he made that vacuous claim.

But it's also important, Inhofe continues, to question whether global warming 'is even a problem for human existence'—because 'increases in global temperatures may have a beneficial effect on how we live our lives'. ⁴¹ This is the typical pattern of argument for the contrarians: the planet isn't really warming; but if it is, the warming isn't due to human activity; and even that's the cause, the effects will be beneficial. It's what Sigmund Freud called 'kettle logic'. When a man accuses his neighbour of returning a borrowed kettle in damaged condition, the neighbour protests: 'I returned the kettle in perfect condition. Anyway it was already damaged when you lent it to me. And in fact I never borrowed your damned kettle in the first place!'⁴²

For Inhofe, the alarmists divert our attention from alleviating poverty and other pressing concerns by a constant clamour of warnings: 'Global warming alarmists see a future plagued by catastrophic flooding, war, terrorism, economic dislocations, droughts, crop failures, mosquito-borne diseases, and harsh weather all caused by manmade greenhouse gas emissions.' Which is just what such conservative bodies as the IPCC and the US military were already predicting—and what we've actually experienced with increasing frequency over the ensuing decade or so. Notwithstanding, Inhofe claimed with respect to the Third Assessment Report of 2001 that 'parts of the IPCC process resembled a Soviet-style trial, in which the facts are predetermined, and ideological purity trumps technical and scientific rigor.' Again this absurd criticism can come close to being valid only when applied to Inhofe himself.

Inhofe devotes most of his speech to denigrating the IPCC's Assessment Reports based on the views of a select group of global warming-denying scientists, including of course Soon and Baliunas. Only half of the people he cites are climate scientists, and *all* of them were receiving funding from the fossil fuel industries, either directly or through organisations like the Marshall Institute.⁴⁴

Inhofe cites a study by John Christy and Roy Spencer at the University of Alabama that showed only a minuscule rise in temperatures between 1979 and 1990'. 45 What he *doesn't* say is: first, that numerous scientists

responded in the late 1990s to the Alabama study, showing that the authors' estimation procedures were faulty; and second, that Christy and his colleagues subsequently acknowledged their own errors. In fact a report by the National Research Council published in 2000, of which Christy was one of the co-authors, concluded that the warming trend was real, and higher than the rate in the twentieth century overall.⁴⁶

Yet as late as 2003 Inhofe had the impertinence to claim, based on Christy et al. 1992, that 'the best data ... shows no meaningful warming trend of increasing temperatures'—pretending that Christy et al. 2000, which negates that conclusion, was never published. Despite a consensus in the scientific literature that the earlier studies by Christy have been discredited, Inhofe never retracted his false claim about temperature trends, and the pdf of his screed was still available on his website in 2016.

He performed a similar trick when he used SB2003, which he called the 'Harvard Smithsonian 1,000-Year Climate Study', in an attempt to discredit the IPCC and the Kyoto Protocol. According to Inhofe, this study

offers a devastating critique of [Michael] Mann's hypothesis [concerning human-caused global warming], calling into question the IPCC's Third Assessment, and indeed the entire intellectual foundation of the alarmists' views. It draws on extensive evidence showing that major changes in global temperatures largely result not from manmade emissions but from natural causes. ⁴⁷

Well, this does sound as if it deserves a fanfare—until you recall that it's two non-climate scientists up against the four large volumes of the IPCC's Third Assessment Report researched by several hundred climate scientists from 56 countries.⁴⁸

But what did Inhofe know, or should he have known, before praising SB2003 in his senate statement on July 28, 2003? Well, we know he was following the work of Michael Mann, the better to persecute him, because he criticised Mann's contribution to the 2001 IPCC report in his Senate statement. So you can be sure that his staff would have brought the devastating refutation of SB2003 by Mann et al. to his attention, which appeared on July 8—unless they'd been instructed to screen out anything the boss might find disturbing. A couple of weeks later Inhofe ignored a critical piece on Soon & Baliunas in *Scientific American* by the science writer David Appell (whose views he disparages in his Senate statement).⁴⁹ Appell cites two scientists whose work was abused by SB2003 and who called the study a travesty.⁵⁰

In fact Inhofe does cite two serious climate scientists in his Senate statement, but because his ideology blinds him to what they're saying he gets them wrong and misrepresents their work. Both of them wrote to the Senate to protest the misuse of their findings, but Inhofe simply ignored

them, keeping his misrepresentations in the document on his website (the last page of which bears the seal of the United States Senate).⁵¹ There's no excuse for this wilful spreading of ignorance: if scientists claim he's distorting their published research, and Inhofe refuses to remove those distortions from his repertoire and website, he brings disgrace to the Senate and Congress.⁵²

Having cited contrarian scientists and cherry-picked figures to argue that 'global warming alarmism' is baseless, Inhofe asks what can be motivating it. His answer: money. 'Environmental extremists rake in million of dollars, not to solve environmental problems, but to fuel their ever-growing fundraising machines, part of which are financed by federal taxpayers.' Which leads to the rousing finale, a flourish that made headlines:

With all of the hysteria, all of the fear, all of the phony science, could it be that man-made global warming is *the greatest hoax* ever perpetrated on the American people? It sure sounds like it.⁵³

Sounds very much like one of those darned conspiracies to me. Or is Senator Inhofe the one who's perpetrating the hoax? We'll return to this question shortly.

Inhofe's first term as Chair of the Senate Environment Committee fell squarely with the Younger Bush presidency, and no doubt received much inspiration concerning the nature of reality from that higher office. The religious right in general received a huge boost to their inclination to deny reality during those eight long years, thanks to George W's reliance on his religious instincts, on 'what God has told him to do'. As one 'libertarian Republican' explained it at the time, the reason Bush 'dispenses with people who confront him with inconvenient facts' is this: 'He truly believes he's on a mission from God. Absolute faith like that overwhelms a need for analysis.' Also any need to base one's decisions on the reality of the situation.

Indeed, 'the reality-based community' is a term of contempt used by a senior advisor to Bush the Younger, referring to those who lack political power or money, and who are naive enough to believe in some kind of objective reality. In an interview with a Pulitzer Prize-winning journalist in 2004, this man displayed admirable candour concerning what the Bush administration was up to. In response to the old-fashioned idea that the press reports what actually happened, what politicians actually decided and did, he said:

That's not the way the world really works any more. We're an empire now, and when we act, we create our own reality. ... We're history's actors, and you, all of you, will be left to just study what we do. 55

To put it another way: we in the government do what we like because we have the power, and we lie whenever it's to our advantage, impressing the appropriate falsehoods upon the public through the most effective means at our disposal. Just like the Soviets—and also the new American way long before the 'post-truth' politics of the Trump team and their 'alternative facts'.

Inhofe is exemplary in this respect. Although he likes to present himself as someone who knows and understands climate science, it's clear how partial his knowledge is, and how he's more interested in creating his own reality than finding out what's actually going on. Just as he fastened onto the flawed studies of Christy and Spencer and ignored all the subsequent research that refuted their findings, so he elevated the work of the cartoonish Soon and collaborators to the status of absolute truth, invoking it time and again in the Senate, as if its speciousness had never been demonstrated, devastatingly, by real climate scientists.

In the controversy over the notorious 'Clear Skies' legislation in 2005 (the Bush initiative designed to give industries more leeway to make the skies murky), Inhofe rejected limits on carbon dioxide because 'it is not a pollutant and Clear Skies deals only with pollutants'. He clinched the matter by invoking the Hoax again, though at a notch lower in the rankings: global warming was now 'the second-largest hoax ever played on the American people, after *the separation of church and state*'. ⁵⁶ The perpetrator of this new greatest hoax was apparently Thomas Jefferson, a figure not generally associated with deceiving the American people.

When Jefferson spoke of 'building a wall of separation between Church & State' in his letter to the Danbury Baptists, it was in the context of the First Amendment: 'Congress shall make no law in respect of establishment of religion, or prohibiting the free exercise thereof'. 57 'Making no law' is neither a strenuous nor time-consuming activity, and it's the kind of wall of separation that doesn't need special funding. But Inhofe wants to go further and have Congress make no law that regulates business or industry for the public good—on the grounds that *God*, being omnipotent, *controls the climate*. You see how the two hoaxes are related, in his mind at least.

The 'environmental extremists', Inhofe claimed in his 'Climate Change Update' from 2005, are making money from practising their religion. 'Put simply, man-induced global warming is an article of religious faith. ... I have insisted all along that the climate change debate should be based on fundamental principles of science, not religion.'58 Yes, scientific explanation is the farthest thing from an article of religious faith. Many people who are ignorant of climate science say, 'I don't believe in global warming', as if it were an object of faith rather than a phenomenon confirmed by science. And even scientists who have made a religion of their profession—many of

them atheists and otherwise irreligious—still acknowledge 'fundamental principles of science' in the context of the history and sociology of the Republic of Science.

A few weeks before the UN Climate Change Conference in Copenhagen in December 2009, an unidentified hacker stole thousands of emails from the server of the Climatic Research Unit at the University of East Anglia and posted them on the internet. The timing of 'Climategate' (as it came to be called) was so clever—spread suspicion of climate scientists right before the big conference—that you wonder who financed this little crime. The news media inflated the emails' contents into a huge scandal, and the global warming denial community proclaimed that the stolen messages confirmed a conspiracy on the part of unscrupulous scientists.

The day after the revelations, Inhofe launched a vigorous campaign of intimidation of the researchers (including Michael Mann) whose emails had been hacked. He posted a Minority Staff report on the Environment Committee website, "Consensus" Exposed: The CRU Controversy', which included a list of seventeen 'Key Players'. The report reached this threatening conclusion:

The scientists involved in the CRU controversy violated fundamental ethical principles governing taxpayer-funded research and, in some cases, may have violated federal laws. The next phase of the Minority's investigation will explore whether any such violations occurred.⁵⁹

No attempt here to reserve judgment until the situation is properly understood, not to mention practising Christian charity or love of one's neighbour.

Subsequently, no fewer than *seven* independent investigations, four in the US and three in the UK, by institutions from the National Science Foundation to the House of Commons, found *no* evidence of wrongdoing on the part of the 'Inhofe Seventeen'. But of course this had no effect on the senator's persistent insinuations that Mann and his colleagues were criminals: in reality as created by Inhofe, they remain guilty of violations.⁶⁰

The Minority Report takes the opportunity to accuse climate scientists of harassment if they presume to question the credentials of the deniers' cherished contrarians. Mann and his colleagues, it says, 'launched a campaign of petty invective against scientists who dared question their findings and methods ... casting their opponents as industry shills masquerading as scientists, savaging their reputations.' But they were industry shills—well paid too—and for the most part not climate scientists.

It's in any case better to be the target of petty invective than of real, credible death threats, which is what several of the Inhofe Seventeen, and climate scientists in other countries, have been subjected to.⁶² In view of

Inhofe's contention that his Minority Report showed that 'Mann and his colleagues ... acted like a priestly caste, viewing substantive challenges to their work as heresy', we should perhaps be thankful there weren't any calls to burn the evildoers at the stake.

5.4 Other True Believers

One of the additional authors for version 2.0 of SB2003 was David Legates, a professor of geography whom Senator Inhofe often invited to hearings of the Environment Committee. What he liked about Legates was perhaps not so much his contrarian views as the basis for them: a somewhat more elaborate version of 'God controls the climate'.

For scientists who work on climate change the important task is to determine whether (1) recent global warming is a result of natural variation, or (2) human activities are having a decisive effect. For Legates, by contrast, the first alternative is dubious and the second impossible, because he believes (3) that the earth's climate system depends on a transcendent source, the Creator God of Christianity. We know this from his being a 'Prominent Signer' of the Cornwall Alliance's 'Evangelical Declaration on Global Warming'.

Another climate scientist among the 'Prominent Signers' was Roy W. Spencer, the co-author with John Christy of the no-increase-in-temperature study and winner of the 'Outstanding Evangelical Climate Scientist Award' presented by the Heartland Institute. Their counterintuitive and false conclusion—temperatures have really been going down in recent decades—is more comprehensible in the light of what Spencer believes, along with Legates and Inhofe.⁶³

The Evangelical Declaration consists of three main parts, 'What We Believe', 'What We Deny', and 'A Call to Action'. It's worth considering an excerpt from each, since they attest to beliefs that are held by more than a few Americans.

We believe Earth and its ecosystems—created by God's intelligent design and infinite power and sustained by His faithful providence—are robust, resilient, self-regulating, and self-correcting, admirably suited for human flourishing, and displaying His glory. Earth's climate system is no exception.

We deny that Earth and its ecosystems are the fragile and unstable products of chance, and particularly that the Earth's climate system is vulnerable to dangerous alteration because of minuscule changes in atmospheric chemistry. ... There is no convincing evidence that human contribution to greenhouse gases is causing dangerous global warming.

We call on political leaders to adopt policies that protect human liberty ... while abandoning fruitless, indeed harmful policies to control global temperature.⁶⁴

Yes, protect the liberty to harm others while making a profit for yourself. Because the climate system is sustained by the providence of a Creator God of infinite power, it *cannot* therefore be vulnerable to alteration by human activity—which in turn renders any policies aimed at controlling global temperature 'fruitless' indeed.

Because David Legates believes this, the results of his research have to show that global warming isn't attributable to human activity. And if he and like-minded colleagues search the climate records thoroughly, and cite the data selectively, they're sure to be able to clutch some straws with which to shore up their foregone conclusion. What you believe is paramount; and once you've found a few like-minded people, you can simply ignore any actual facts that don't fit your fantasy.

Although the scientific evidence is incontrovertible and apparently impossible to ignore, a number of influential Republicans agree with Inhofe that the findings of the climate sciences *must* be wrong, or irrelevant, because they're incompatible with how they understand God's dominion over the earth. One of this number is Representative John Shimkus, Chair of the House Subcommittee on Environment and Economy.

Shimkus follows Inhofe's lead in calling for more carbon dioxide because 'it's plant food', as well as in his belief that God controls the fate of the planet. At the beginning of a statement he made at a hearing in 2009 on adaptation policies for dealing with climate change, Shimkus cited two passages from the Bible on the desk in front of him. First, Inhofe's favourite 'As long as the earth remains' (to be discussed shortly), but then an apocalyptic line from Matthew 24:31, 'And he shall send his angels with a great sound of a trumpet', from which he drew the conclusion: 'The earth will end only when God declares its time to be over. Man will not destroy the earth; this earth will not be destroyed by a flood.'66 Yes, but if he had cited four more sentences he would have read: 'Heaven and earth shall pass away' (24:35).

During Hall's tenure as Chair, another member of his committee, Representative Paul Broun, claimed that, whereas 'God's Word is true', evolution, embryology and the Big Bang theory are 'lies straight from the pit of Hell'. He said this at a private function, and of course there's no problem with his conducting his private life according to his religious beliefs. But Rep. Broun, oblivious to the advantages of separating church and state in a Republic as diverse as the US, makes it clear that his private opinions thoroughly determine his public service as a politician.

The Bible ... teaches us how to run all our public policy and everything in society. And that's the reason, as your congressman, I hold the Holy Bible as being the major directions to me of how I vote in Washington, DC, and I'll continue to do that.⁶⁷

For a congressman to be guided by Holy Scripture in his work isn't necessarily a bad thing, but if it leads to his seeing scientific theories as 'lies straight from the pit of Hell', this surely disqualifies him from membership of any committee on natural science.

Another representative from Texas, Joe Barton, is rarely hesitant to cast the first stone. When he was Chair of the House Energy Committee in 2005, Barton responded to the temperature studies by Michael Mann, Raymond Bradley and Malcolm Hughes by writing threatening letters to all three authors. The letters were crafted to look as if they had the power of a subpoena, and demanded insane amounts of documentation concerning the scientists' research and the sources of their funding over the course of their entire careers. Even his fellow Republican, Rep. Sherwood Boehlert, Chair of the House Committee on Science, called Barton's action 'at best foolhardy' and said his letters betrayed his committee's 'inexperience' in matters of science.⁶⁸

Yes, not much expertise there—but the committee's tactics are effective against scientists who are producing inconvenient results: harass them so mercilessly that they don't have time to produce any more research. Frustrating for the scientists, and expensive for the taxpayers.

But even if the planet *is* warming, Barton knows that human activity can't be causing it because he too believes that God controls the climate. At a 2009 congressional hearing (why bother?) on shifting from fossil fuel sources of energy to renewables, Barton made the following informative statement:

Now, wind is God's way of balancing heat. Wind is the way you shift heat from areas where it is hotter to areas where it is cooler. That is what wind is. Wouldn't it be ironic if in the interest of global warming we mandated massive switches to energy, which is a finite resource, which slows the winds down, which causes the temperature to go up?⁶⁹

The incoherence might be understandable in a schoolboy who hasn't prepared adequately for a physics test; but for a grown man who's meant to be heading the House Energy Committee it's impossible to excuse.

But perhaps, deep down, Barton doesn't feel any tension between the natural and the divine. As he said in an interview: 'A lot of the CO₂ that is created in the United States is naturally created. You can't regulate God. Not even the Democratic majority in the US Congress can regulate God.'⁷⁰ Presumably not. But then he muddied the waters further by adding: 'I think you can have an honest difference of opinion of what's causing climate

change without automatically being either all in that's all because of mankind or it's all just natural.'

Well no: it can't be an either/or situation because natural variation has been there from the beginning of the earth-system, and it wasn't until the presence of humans engaging in agriculture that any non-natural climate forcings from humans could register in the climate record. So the question is whether the signal, the human contributions to global warming, is audible against the background noise of natural variation. The problem is that Barton equates natural variation with God-created variation: climate change has become—in the words of insurance policies the world over—'an act of God' rather than something caused by human activity.⁷¹

Between 1990 and 2010 Rep. Barton received almost \$1.5 million in contributions from fossil fuel concerns, giving him first place among all House members in that lucrative field. ⁷² The group Citizens for Responsibility and Ethics in Washington awarded Barton a place among the nineteen 'Most Corrupt' congresspersons, for 'misusing his position for personal financial benefit'. ⁷³ (This was several years before the Trump cabinet surpassed all worst fears.)

Another energetic fighter in the Inhofe and Barton mould is Rep. Lamar Smith, who after a long time as a member of the Science Committee became Chair in 2013. Smith has no training in the natural sciences, though (as noted earlier) he likes to talk about 'scientific method'—perhaps on the basis of being a committed Christian Scientist. He's also a contributor to Breitbart News, a speaker at Heartland Institute conferences, and has received some \$785,000 in campaign contributions from the fossil fuel industries.⁷⁴ This background apparently inclines Rep. Smith to conspiracy theories, as we'll see shortly.

In a statement made when he was running for the Chair of the Science Committee, he claimed to have 'studied astronomy and physics in college', though in a speech several months earlier he had said he took a physics class as a freshman and realized he wasn't one of 'the future Einsteins' who were sitting in the same room. He graduated in American studies, and so presumably didn't study much astronomy either.⁷⁵

When Smith got the Chair he used his power to harass people and agencies he doesn't like by bombarding them with subpoenas for raw data, email correspondence, and even text messages. He got the Committee to issue its first subpoena in twenty-one years, against the EPA in 2013, concerning the raw data for a study of air pollution and mortality that had been published *twenty years* earlier. Three years after taking over as Chair,

he had issued more subpoenas than the Committee had in the previous five decades.

In 2015 scientists at the National Oceanic and Atmospheric Administration published a study in the journal *Science* confirming that a putative 'pause' in global warming (1998-2013) didn't actually happen. The authors present 'an updated global surface temperature analysis' that supersedes the official record at NOAA.

They adjusted for known biases in ocean temperature readings from ships and buoys, while also adding measurements from other land-based monitoring stations—expanding the range of those stations into the Arctic. The revised record showed temperatures rising consistently.⁷⁷

Their findings are consistent with several other peer reviewed studies from around the same time, as well as with the general practices of the climate sciences.

The problem is that global warming deniers are invested in the reality of this once apparent hiatus, because it allowed them to hold on to the first plank of climate denial: the earth isn't really warming up after all. Chairman Smith, a devout denier, asked NOAA for the data the analysis was based on, and any internal communications related to the study. NOAA provided the Committee members with a special briefing about the research, along with the data for the study, but they refused to release the communications, in keeping with customary scientific practice, for reasons of confidentiality.

Chairman Smith responded with a subpoena and—good conspiracy theorist that he is—he even issued a formal statement accusing the scientists of *falsifying* their data. ⁷⁸ Smith's first sentence contains this blatant falsehood: 'climate data has clearly showed no warming for the past two decades.' What the sciences of temperature measurement clearly show is that the warming continued over that period (even though the *rate* of warming dropped). He then accuses the researchers of *altering data* 'to get the politically correct results they want' and 'to advance this administration's extreme climate change agenda'. ⁷⁹ Whoah! NOAA is respected globally for its expertise, and these are respected authors whose work was peer reviewed by respected experts—yet only Rep. Smith has seen the illegitimacy.

Why is this? First, his worldview depends on the unreality of global warming, so all that registers with him on climate change are studies that say the warming isn't real. Second, he doesn't understand how the sciences of temperature measurement work, and so any adjustment for the sake of better understanding appears as tampering. And third, his conspiracy theory mentality assured him that climate scientists were plotting with the

Obama administration to feather their own nests and further a liberal agenda. Yet another conspiracy.

Science is the pre-eminent journal in the field, and the article was approved by the authority of scientific opinion through peer review before publication and by several other peer reviewed articles on the topic. The warming is a fact—and Smith, as many critics have remarked, is simply harassing the scientists for presenting findings that contradict his own position of denial. And this man is the Chair of the Science Committee?

Like his benefactor Charles Koch, Smith has no training in science but likes to pronounce on scientific method. He once opened a hearing of the Science Committee by saying: 'Today we will examine the scientific method as it relates to climate change.' He went on to claim that scientific method 'involves identifying a question, developing a hypothesis, constructing an experiment, and analysing the results.' At the most basic level, yes—but the diverse climate sciences operate in ways that are different from the method of chemistry, for example, where you can perform experiments in a laboratory under controlled conditions. How on earth could you devise an experiment that works in a laboratory the size of the geosphere?

In his insistence on what he understands as scientific method, Smith simply rules out the climate sciences. Since John Tyndall's experiments in 1859, scientists have known that gases like carbon dioxide and methane block radiant heat, and a century later they began discovering that increases in greenhouse gas emissions are accompanied by a rise in temperature. No further experiments are needed, just lots of measurements and calculations, involving statistics and probabilities that help scientists get clearer on what is signal and what is background noise. We've already left the realm where certainty is possible.

But 'the scientific method', Chairman Smith reminds us, 'avoids speculation about distant events for which there is no hard proof. Alarmist predictions amount to nothing more than wild guesses. The ability to predict far into the future is impossible.' Of course there can by definition be no 'hard proof' concerning what will happen in the future—at least until it has come to pass. But far from trafficking in wild guesses and alarmist predictions, scientists use their estimates of climate sensitivity to model various scenarios and the kinds of risks that accompany them.

Climate scientists have been using 'global climate models' or 'general circulation models' since the 1960s, to study the circulations of energy (heat especially) through the atmosphere, oceans, sea ice, and the surface of the land. On the basis of equations from thermodynamics, scientists use computers to model the effects on these circulations of increases in temperature, on the basis of which they project a range of scenarios for the

future. For example: adding n more parts per million of greenhouse gases to the atmosphere is likely to raise average global surface temperatures by p degrees, which is likely to produce effect x on sea level rise. And then a scenario for n + 10 ppm, and so forth.

This is one of the more difficult features of the climate sciences for the layperson to understand, but in the course of his decades on the Science Committee Rep. Smith doesn't appear to have even tried. One reason the Science Chair doesn't get how the climate sciences work may be that he's blinded by his faith in Christian Science, for whose adherents 'the whole material world is a counterfeit'. After all, 'Christian Science denies the whole testimony of the senses ... and declares all that is unlike God to be error, without real existence, and to be continually denied.'82 But the remit of Rep. Smith's committee isn't Christian science but rather *natural* sciences—about which the Chair ought to be knowledgeable.

Notes

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- ⁸ Beisner, Moyers, 'Is God Green?', 39:30, 44:25.
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Appendix

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- ¹⁹ Soon and Baliunas, 'Proxy Climatic and Environmental Changes', 105.
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Chapter 4

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- ⁴² My paraphrase of a passage in Sigmund Freud, *The Interpretation of Dreams*, ch. 2.
- ⁴³ Inhofe, 'The Facts', 9. This gobsmacking disparagement of the IPCC process is based on remarks by Dr. Richard Lindzen, Inhofe's best known contrarian scientist.
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- ⁴⁸ See Appendix ?* for a discussion of SB2003*.
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