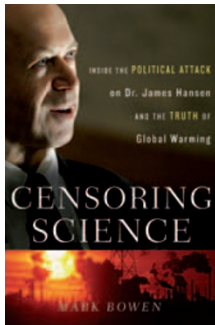


An outspoken scientist



CENSORING SCIENCE: INSIDE THE POLITICAL ATTACK ON DR. JAMES HANSEN AND THE TRUTH OF GLOBAL WARMING

by Mark Bowen

Penguin Books: 2008. 336pp. \$25.95

The White House-led censorship of climate scientist James Hansen shows what can happen when those who should know better stand idly by.

Around the time George W. Bush became US president in 2001, and long before the recent awakening of his compatriots to the urgency of global warming, one of the world's pre-eminent climate scientists became convinced that a modest warming, perhaps as little as 1 °C above recent levels, might be dangerous.

The policy implications were clear: to avoid such a warming, emissions would need to be cut promptly. Having worked on global warming for about a quarter-century, James Hansen, director of NASA's Goddard Institute for Space Studies, embarked on what he thought to be the right path. Being a government scientist, he was determined to inform the US public and the Bush administration of the need for action.

Hansen proceeded by developing a scenario with his colleagues for reducing emissions enough to avoid dangerous warming, and he began to speak freely about the urgency of implementing it. But after a brief flicker of attention, the administration's interest in his scenario faded — mainly owing to the realization that it would entail curbing emissions from fossil fuel sources of greenhouse gas, as well as other sources. Hansen began to criticize the influence of special interests and the resulting US inaction on global warming. He even publicly discussed his electoral preference for new leadership, on his own private, unpaid time. In doing so, Hansen staked a claim to unfettered speech far beyond the usual scientist's model of announcing research findings. If there was ever a pure test of the rights of government scientists, this was it.

Censoring Science: Inside the Political Attack on Dr. James Hansen and the Truth of Global Warming is Mark Bowen's account of the struggle that ensued between Hansen and the Bush

administration over a basic principle: a government scientist's right to speak freely to the press. *Censoring Science* intertwines three separate but closely related stories. The first narrates the step-by-step attempts of a low-ranking NASA press staffer and right-wing ideologue, along with other officials, to censor Hansen. The concatenation of detail is not initially gripping — a timeline of events would have been helpful — but as it accumulates, the case is ultimately compelling. Bowen's demonstration that censorship spread far beyond Hansen, affecting many climate scientists in NASA and in the National Oceanic and Atmospheric Administration, is convincing and disturbing.

Bowen makes a strong argument that the censorship policy originated in the White House and was administered by staff in two of its offices, the Council on Environmental Quality and the Office of Science and Technology Policy (OSTP), the latter directed by physicist John Marburger. Assuming Bowen is correct about the OSTP's role, what could Marburger have been thinking as he watched his subordinates try to censor scientists? Did he even know what they were up to? If not, why not? The book doesn't say. Bowen gives a clearer sense of the role of NASA Administrator Michael Griffin, who was apparently cowed by his supposed underlings as he watched them carry out White House orders. There are deep questions here about the moral responsibilities of government officials at all levels acting as passive facilitators of misdeeds. Bowen points toward these issues, but lets the reader be the judge.

The second story, Hansen's human journey and his relationship with his wife Anniek, his children and his

grandchildren, is more subtle and less detailed, but it helps the reader understand the source of the personal strength that allowed Hansen to stand up to NASA leadership and the White House. Bowen tells us just barely enough to transmit a sense of the human being inside the scientist.

Finally, there is the story of Hansen the research scientist and his discovery of the importance of the greenhouse effect. Bowen provides a fascinating tour of Hansen's scientific mind and mental voyage over 30 years, including the basis for his prescient assertions about the future course of warming. But here the story swerves off course into a morass of condescension and inaccuracy. Rather than providing a slice of science history, Bowen feeds the reader hagiography, as if he feels the need to enhance Hansen's stature — a completely unnecessary exercise — by reducing that of other scientists.

For example, Bowen refers to legitimate scientific criticism of Hansen's findings as "potshots" and erroneously asserts that Hansen's initial paper on climate change considered the warming effect of non-carbon dioxide trace gases "for the very first time". He also wrongly implies that the Intergovernmental Panel on Climate Change, in its Third Assessment, asserted that the signal of global warming could have been detected by the late 1970s. Bowen further mistakenly asserts that Michael MacCracken, then at the US Department of Energy, "took the lead" in a landmark 1983 US National Academy of Sciences report on the threat of warming and is to blame for its soothing tone. In reality, MacCracken coauthored one science chapter but wasn't even on the committee responsible for the overall report and its policy-relevant conclusions. Bowen's smug attitude toward scientists

involved in the 'global cooling' warnings of the 1970s is particularly inappropriate. The key issue, aerosol forcing, was complex and uncertain then, and remains so today.

Despite these shortcomings, this book should be read by anyone interested in the fraught relationship of science to

government. It provides an articulate reminder of what can happen when people who should know better stand by passively while others' rights are trampled.

Published online: 16 January 2008
doi:10.1038/climate.2008.3

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Time to advance the debate



CLIMATE CHANGE: WHAT IT MEANS FOR US, OUR CHILDREN, AND OUR GRANDCHILDREN (AMERICAN AND COMPARATIVE ENVIRONMENTAL POLICY SERIES)

Edited by Joseph F. C. DiMento and Pamela Doughman

The MIT Press: 2007. 232pp. \$19.95

Despite the abundance of information on climate change, finding ways to meaningfully engage the public on this topic remains a formidable challenge.

2007 was the year of the climate. It brought a shift in US congressional power and with it an opening to serious discussions of federal policy, an Oscar for former US vice president Al Gore's docu-drama *An Inconvenient Truth*, and the release of the latest assessment by the Intergovernmental Panel on Climate Change (IPCC). The Nobel Peace Prize was jointly awarded to the IPCC and Al Gore for their scientific and communication efforts on the issue, and the year ended with the UN conference on climate change in Bali, Indonesia. News coverage of global warming in 2007 was unparalleled, and surveys of the American public showed high levels of awareness of the problem, unprecedented agreement on its reality and human causation, and increasing worry about what it may mean.

Into this context falls DiMento and Doughman's *Climate Change: What it Means for Us, Our Children, and Our Grandchildren*, which aims "to educate students and members of the general public about the scientific and political issues concerning climate change by providing balanced and well-documented information and observations about the problem". It assumes that the public needs and wants more information and that, although understanding such a complex issue is a challenge, it can be made comprehensible and meaningful to lay publics. An honourable goal indeed,

and one shared by countless climate change communicators who hope that greater understanding of the issue will somehow lead to active engagement.

The editors' central assumption — that more or better information will lead to right action — is a common one. The same idea underlies Gore's *An Inconvenient Truth*. In psychology, this notion is called the information (or knowledge) deficit model. It has repeatedly been proven wrong, or at least inadequate. Time after time, researchers find that information never suffices to motivate an appropriate behavioural response or active engagement with a problem and its solutions. To help people make potentially difficult changes, information and explanation must be augmented with practical help, support to overcome action barriers, social accountability, empowerment, and visions of a feasible positive outcome — in this case, a worthwhile future. Unfortunately, then, this book rests on a shaky basic premise. And at least for this consumer, the editors and contributors are no Al Gores.

Although scientifically the book stands on well-documented if uneven ground, it lacks the engaging storytelling, persuasive clarity and rhetorical finesse of its Hollywood-powered precursor. To be fair, it didn't have the budget, publicity machine, political star, or graphic means, and for this it can't be faulted. But it

comes from professionals whose mission is to communicate science in support of public decisions. One may rightfully expect those with that particular mission to hold a deeper understanding of how to communicate effectively.

First among the rules for effective communication is to ask who the audience is and what it needs at this time. The American public and its many diverse sub-audiences are not generally fluent in matters of science. According to repeated surveys by the US National Science Foundation, the vast majority of Americans, although they profess generic interest in scientific discoveries, show no deep interest or acuity in climate change (or any other) science. I would be hard pressed to believe that this anthology will be found on the bedside tables of the masses.

But what about the 'interested' public, those who seek out information about a particular topic? What can they find here that they didn't already see in *An Inconvenient Truth*? Assuming readers make it past the sketchy introductory chapter, which lays out the difficult landscape of climate change science, policy, and the media communication in between, they then get a summary of climate science and of selected global, regional (read: North American) and local (read: Californian) impacts.

The highlights among the essays that follow include *New York Times* science

reporter Andy Revkin's insider take on why the news media communicate climate change the way they do. Together with Naomi Oreske's accessibly written recap of her *Science* paper on the scientific consensus on anthropogenic climate change, Revkin's piece holds the collection's most provocative and enlightening insights.

The book closes with rough overviews of international, national and local policy responses, along with a dense yet interesting chapter on the implications of climate change for human security. This should have been the key to unlocking the meaning of climate change for us, our children and our grandchildren. The chapter raises interesting questions

that could contribute something new to public debate — for example, “the moral obligation ... we have when a process of global change in which we are deeply implicated places great burdens on people who have had a fairly negligible impact on the global change itself”. Sadly, where the book should have started, it ends, and with an oddly argued, repetitive chapter on risk assessment and the economics of climate change, which opens a can of worms rather than closing one.

I was hoping for a book that would make climate change more meaningful to non-scientists, yet this one barely begins that task. And I doubt that this contribution to communicating climate change will hold readers' interest, given

the more engaging competition. At a time when the science of climate change is ever more alarming and the need for public engagement and deep social change ever more urgent, this book does little to advance public debate. I will hold out that hope for the authors' future work.

Published online: 24 January 2008

doi:10.1038/climate.2008.1

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