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1 January 2005
Available online 9 March 2005

doi:10.1016/j.jhazmat.2005.01.026

P.J. Michaels, *Meltdown: The Predictable Distortion by Scientists, Politicians, and the Media*, CATO Institute, Washington, DC, 2004, 302 pages, US\$ 24.95, ISBN 1-930865-59-7.

Recently, reputable scientists have been active in publishing tomes that challenge the “doomsday myth” of the environmental impact of climate change due to global warming that has appeared with increasing regularity in the popular press, broadcast media and even scientific publications. Michaels exposes the fallacy of these pronouncements and challenges the analysis of many scientists. He does this in a very logical, analytical and dispassionate fashion.

The jacket of the book states the above well:

“Michaels starts with a succinct discussion of climate-change science and then unrolls a litany of falsehood, exaggeration, and misstatement. He cites hundreds of errors and exaggerations in scientific papers, news reports, and television sound bites—from the ‘National Assessment’ of global warming, a Clinton-era document that used computer models that its authors knew did not work, to the infamous *New York Times* story about the melting of the North Pole, published in September 2000 and half heartedly retracted three weeks later”.

Each of the aforementioned errors and exaggerations is discussed scientifically and dispassionately. Michaels backs his disagreement with these pronouncements with detailed analysis, data and logic.

It is not that global warming is nonexistent, it is real, Michaels notes, but it has been exaggerated and the climate impact distorted.

The press release accompanying the book comprehensively reviews the coverage with a point-by-point refutation of many of the “scientific theories”. This material, though long, I believe, will enhance this review:

- Distortion: Global warming is the greatest threat facing the world today.
Reality: Global warming is real, but it has been exaggerated-predictably blown out of proportion by the political and professional climate in which it evolved. When it comes to climate change, there is a culture of distortion out there.
- Distortion: The “greenhouse effect” will lead to more variable weather.
Reality: From 1970 to 1997, a period of greenhouse warming in the United States, summer temperatures re-

mained relatively constant while winter temperatures increased significantly. The result is a less extreme, more moderate thermal climate.

- Distortion: The number and severity of tornadoes are increasing because of global warming.
Reality: The number of reported tornadoes is increasing, not because of global warming, but as the result of improvements in tornado detection technology. There is a decline in the number of severe tornadoes as well as in tornado deaths. Global warming could actually reduce the severity of tornadoes by reducing the temperature contrast between the poles and the tropics.
- Distortion: Ice melting at the North Pole will cause ocean levels to rise.
Reality: The ice at the North Pole is already floating in the ocean, therefore, when it melts it will have no effect on sea levels, just as the water in your glass does not rise when the ice cubes melt.
- Distortion: Tuvula is being swallowed by the ocean because global warming is causing sea levels to rise.
Reality: In the past 50 years, sea level around Tuvula has actually fallen at a rate of approximately 2.3 mm per year, for a total drop of 105 mm.
- Distortion: Global warming is causing the Great Lakes to dry up.
Reality: Precipitation is increasing in the areas that drain into the Great Lakes, and there has been no change in temperature. The result is a net increase in wetness. Great Lake levels show absolutely no downward trend as planetary surface temperature rises.
- Distortion: Global warming will increase drought frequency in the American Midwest.
Reality: Net wetness is increasing, not decreasing, in this region.
- Distortion: The American Southeast will experience average heat indices of 120 F by the year 2100.
Reality: Average heat indices this high are physically impossible to achieve in the Southeast because so much heat is used up on the process of evaporation in the Gulf of Mexico.
- Distortion: High temperatures brought about by human-induced global warming are melting the glaciers of Mt. Kilimanjaro and Glacier National Park.
Reality: Kilimanjaro’s glaciers lost 45% of their extent in the early 20th century, when planetary temperature warmed because of solar changes. As the planet cooled in mid-century, another 231% disappeared. In the recent era of human-induced warming, the loss has been 12%, the slowest rate of recession in the last century. Summer temperatures (the season when glaciers melt) in western Montana show no significant change of the past 100 years. Glacier Park’s icefields began their recession in the mid-19th century as the earth escaped from a cool period without any assistance from humans.
- Distortion: Global warming is increasing heat-related mortality in our cities.

Reality: American cities are, in fact, becoming warmer, but it has much less to do with global warming than it does with the fact that bricks, concrete, and asphalt retain the heat of the day. As cities warmed, heat-related deaths dropped dramatically as people adapted to their changing environment.

- Distortion: Global warming will exacerbate the spread of infectious diseases such as malaria in poverty-stricken areas.

Reality: There is no relationship between global warming and the spread of malaria in Africa. Malaria was endemic to the entire United States in the (cooler) 19th century and was eradicated with sanitation, not climate change.

- Distortion: Global warming will increase the rate of species extinction.

Reality: There is no evidence for massive extinctions associated with human-induced warming, and global warming may actually foster biodiversity by raising temperatures and increasing rainfall. Extinction models that implicate global warming are inadequate because they indicate that even minor shifts in temperature would bring about widespread extinctions, but that is demonstrably not the case.

- Distortion: Scientists are dispassionate truth seekers.

Reality: All scientific issues compete with each other for massive federal research funding. In the process, they must be painted in the starkest terms. There is a natural resistance to publish results minimizing the importance of any highly funded issue.

No one escapes Michael's scrutiny as shown above - the press, politicians, environmental groups and even scientists. Excerpts from the book relating to the above are found below:

- Dan Rather stated on the CBS Evening News that an ultra-drought builds in the West, Southwest, Midwest, and Southeast. Michaels noted that: "To say the least, this was Rather wrong, so wrong at the time of his broadcast that viewers should be urged to fact-check every weather and climate catastrophe story CBS ever runs. Quite simply, there was no 'ultradrought'. By June 13, Illinois (which is in the Midwest) was halfway through what turned out to

be the fourth-wettest June since long-term record in June 1985".

- Al Gore, who ran for President in the U.S. in 2000, came under attack also. Michaels notes: "Because of the UN's vacuous statement about warming, droughts, and floods, it is easy for any climate demagogue to stand in front of a flood or drought and blame global warming (or, it might be added, to blame subzero temperatures on global warming, as Al Gore did on January 15, 2004, vetoing the First Law of Thermodynamics)".
- "Greenpeace is typical of what the United Nations calls 'non-governmental organizations' (NGOs). In Washington, we call them trade associations or lobbyists. Others include the Sierra Club, World Wildlife Fund, and the American Association for the Advancement of Science, and so forth—the usual organizations that use global warming scare stories to generate contributions or to feather the nests of their members, which in turn they use to generate more political pressure, which funds more global warming science, prompting more and more scientists to insist that it is the most problem in history, prompting the writing of this book".

This is a very long review with my inclusion of many citations from the book and accompanying press release, but I believe the topic and the logical scientific analysis of the author deserve it. The myths surrounding global warming and the impact upon the environment are too pervasive to be dispelled by anything less than a well-documented scientific analysis. This book provides that analysis.

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24 December 2004

Available online 9 March 2005