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## **An Inconvenient Truth**

## Gore as climate exaggerator

Ronald Bailey | June 16, 2006

I have <u>long been a critic</u> of former Vice-President Al Gore, but as a <u>recent convert</u> to the view that humanity is contributing significantly to the current increase in average global temperatures, I was trying to keep a somewhat open mind about his new global warming movie, <u>An Inconvenient Truth</u>. As a film, An Inconvenient Truth is a competently made documentary centered on Gore's famous global warming slide show interspersed with shots of him brooding on the fate of the earth. This is the sort of movie that appeals to science lecture powerpoint junkies (of which I am one).

Gore warns that "what is at stake [is] our ability to live on planet Earth, to have a future as a civilization." Let's take a look at some of the evidence that he presents to justify this dire conclusion. He begins by insisting that nothing he has to say is scientifically controversial. Gore claims to be presenting the "scientific consensus" on global warming. But is that so?

Well, at least not always. Take sea level rise for example. Gore spends a lot of time talking about how dramatic melting of the Antarctic and Greenland ice caps that could raise sea level by 20 feet by 2100. He shows computer animated maps in which most of southern Florida, southern Manhattan, Shanghai, and Bangladesh are inundated. "Think of the impact of a couple hundred thousand refugees, and then imagine 100 million," says Gore. Of course his reference to the couple of hundred thousand refugees aims to evoke thoughts about the horrific experience of New Orleanians last year.

Well, the "consensus" of climate scientists as represented in the United Nations' Intergovernmental Panel on Climate Change is that sea level is likely to rise between <u>4 inches to 35 inches</u> with a central value of 19 inches. Nineteen inches is not nothing and is 3 times greater than the sea level rise the world experienced during the 20th century, but Manhattan and most of Florida will most likely still be above water in 2100. A new study in Science concluded if temperatures rose steeply that the Greenland ice sheet might melt away in <u>500 to 1000</u> years. So fortunately we don't have to worry about the impact of 100 million people fleeing relentlessly rising seas all at once, though it would be a good idea for builders and insurance companies to keep the projected rise in sea level in mind.

Gore shows that many mountain glaciers are melting away all around the world—glaciers in Alaska, Europe and Mount Kilimanjaro—are responding to increased warming. (Though the glaciers on Mount Kilimanjaro seem to be melting away because of changes in <u>rainfall</u> patterns rather than to increased heat. Of course, it is possible that the shift in rainfall is the result of global warming.)

As further evidence of warming, Gore notes that permafrost is melting in parts of Alaska and Siberia. The temperatures in central Siberia are thought to have increased by <u>3 degrees Celsius</u> over the past 40 years. This not only causes engineering and infrastructure problems, but might also release even more

carbon dioxide into the atmosphere as once frozen organic matter begins to decompose. But is this warming unprecedented? Perhaps not.

A Russian study in 2004 found that the average temperatures in Siberia during the <u>Holocene Climatic</u> <u>Optimum</u> around 6000 years ago <u>warmed up</u> by 3 to 9 degrees celcius in the winter, and by 2 to 6 degrees celcius in the summer. Due to changes in the earth's orbit which affect how much sunlight reaches the surface, pretty much the entire Arctic was <u>warmer</u> than now 6000 years ago. Which brings me to the polar bears.

Gore shows an animation of a polar bear (very reminiscent of the <u>Coca Cola bears</u>) swimming pitifully in the sea trying to haul itself up onto the last piece of ice floating in the Arctic Ocean. In 2002, the World Wildlife Fund issued a report warning that global warming was <u>endangering</u> polar bears. Arctic sea ice is thawing sooner and this means that the bears who hunt seals on the ice have fewer opportunities to feed themselves. This week saw an alarming report that hungry polar bears are turning <u>cannibal</u>. Yet, the WWF report itself found that most bear populations are either stable or increasing (see page 9 of the report). And remember, polar bears evidently survived when Arctic temperatures were warmer 6000 years ago. Of course, if predictions that the entire Arctic Ocean will be <u>ice free</u> in 100 year turn out to be right, then the polar bears will have a problem.

Gore also argues that global warming will increase storminess. As suggestive evidence, Gore cited several examples of recent severe weather events across the globe. For example, he pointed the heat wave that hit Europe in 2003 that killed some 35,000 people with temperatures hitting 104 degrees Fahrenheit. But historically such temperatures are not unknown to Europe. In July 1921, a heat wave hit much of Western Europe with the temperature reaching 104 degrees Fahrenheit in Strasbourg, France. Gore also pointed to the monsoon storm in 2005 that dumped 37 inches of rain in 24 hours on Mumbai India. But storms like that have happened before—even in the United States. In 1921, Thrall, Texas experienced a 24-hour downpour of <u>38 inches</u> and Alvin, Texas was soaked with 43 inches over a 24-hour period in 1979.

Gore points to the devastation of the Hurricane Katrina and flatly says that global warming is increasing the intensity of hurricanes. But that claim is <u>hotly contested</u> by climate scientists. For example, a recent study in Geophysical Research Letters finds "based on data over the last twenty years, no significant increasing trend is evident in global ACE [accumulated cyclone energy] or in Category 4J 5 hurricanes."

At a climatic moment (pun intended) in the film, Gore traces a red temperature line inexorably increasing while he declares that 10 of the hottest years on record occurred in the last 14 years. Then he asserts that 2005 was the hottest ever. Pause for effect. Basically, Gore's general point is right but it's just irritating for him not to acknowledge that 2005 is statistically indistinguishable from <u>1998</u>. But doing that would not have had the quite the same dramatic effect in the film.

Of course, the <u>increase of carbon dioxide</u> released into the atmosphere by burning fossil fuels is thought to be the chief contemporary driver of global warming. All things being equal higher carbon dioxide levels lead to higher temperatures. Gore illustrates the relation between carbon dioxide and temperatures with a chart showing data taken from ice cores from Antarctica. These ice cores contain tiny bubbles of air from the earth's atmosphere all the way back to <u>650,000 years</u> ago. Scientists measure them to see the proportion of various gases that were in the atmosphere when the bubbles were trapped. Gore points out that temperatures and carbon dioxide go up in tandem over the last four ice ages. But wait—Gore fails to mention something interesting. Temperatures go up first and then the level of carbon dioxide in the atmosphere increases some 800 or more years later. The <u>one interpretation</u> is that orbital changes start periods of warming which then affect ocean circulation such that the oceans begin to release carbon dioxide levels

are 27 percent higher than they have been in the last 650,000 years.

Gore overhypes the spread of various diseases due to global warming. As proof for his claim, he points to the arrival of West Nile virus in the United States and even hints that avian flu might be affected by global warming. West Nile virus (WNV) is a mosquito-borne virus that <u>first appeared</u> in New York City in 1999, apparently somehow arriving from Israel. It is quickly spreading across the country carried by birds on which mosquitoes feast. The Centers for Disease Control map of WNV and related viruses shows that WNV is not confined to tropical regions. WNV took hold here not because of increases in global temperatures, but because, like <u>malaria</u>, <u>cholera</u>, and <u>dengue</u> before it, an appropriate carrier finally made it across the Atlantic. Lowering global average temperatures is not the way these diseases will be controlled, effective public health measures and vaccines is. And of course, outbreaks of flu are not generally associated with higher temperatures.

Finally, Gore allows that some skeptics of global warming catastrophe may be sincere in their beliefs; however, he apparently assumes that most such <u>global warming "deniers"</u> are similar to "tobacco scientists" who were paid for "studies" that sowed doubt about whether or not cigarettes can cause lung cancer. Make no mistake about it—what the tobacco companies did was a despicable attempt by corporations to hijack and distort science to protect their profits and it backfired. Perhaps some global warming skeptics are paid advocates (liars), but many are not. Gore's tobacco industry insinuation is an attempt to discredit opponents by smear rather than on the basis of scientific evidence. Why does he bother with such low tactics since the bulk of the scientific evidence supports his views now? Because partisanship dies hard.

In *An Inconvenient Truth*, Gore makes a big deal about how his Harvard professor, oceanographer Roger Revelle, influenced his views about the dangers of global warming. A genuinely gifted scientist, Revelle was responsible for the creation of the Mauna Loa Observatory that has been measuring the increase in atmospheric carbon dioxide since 1958. However, Professor Revelle co-authored an article in the house journal of the Cosmos Club in Washington, DC in 1991 which concluded, J The scientific base for a greenhouse warming is too uncertain to justify drastic action at this time.J Professor Revelle died shortly after the article appeared. This conclusion apparently dismayed Gore whose staff worked behind the scenes to spread the rumor that Revelle's co-authors had taken advantage of a senile old man and that Revelle's name should be taken off the article. This sorry episode ended with a lawsuit in which another Harvard professor who had conferred with Gore's staff formally apologized for making his insinuations.

In any case few climate scientists now contest the idea that <u>humanity is contributing</u> to the current warming trend. All of the various data sets, surface thermometers, satellites and weather balloons, now show global average warming of about +0.16 degrees Celsius per decade since 1979. Whether or not this rate of warming would lead to <u>catastrophe or not</u> is still very much an open question. So what, if anything, should we do about any future warming?

Unfortunately, those who have been skeptical that global warming was happening at all will now have a credibility problem with the public when it comes to policy recommendations on how best to handle any future warming. The much of the public will likely conclude that if the skeptics were wrong on the science, then they will be wrong on policy. Of course that's not necessarily the case—being right on science doesn't mean that one is automatically also an expert on the proper policy response.

What does Gore recommend? He focuses on policies the cut emissions, but largely ignores those that would enhance our ability to adapt to future temperature changes. So *An Inconvenient Truth* ends with suggestions for how viewers can personally cut back on their carbon emissions—install compact fluorescent light bulbs; take mass transit; adjust thermostats two degrees up in summer and two down in winter; use less hot water; and plant carbon-absorbing trees. He also urges viewers to push their

Congressional representatives to vote for the McCain-Lieberman Climate Stewardship and Innovation Act which would set limits on U.S. emissions of greenhouse gases. Gore advises consumers to switch to renewable fuels, but is strangely silent on climate friendly nuclear power. If we did everything Gore recommends, he claims that our emissions would drop to what they were in <u>1970</u>—a cut of over 25 percent. However, some researchers argue that in order to stop the increase of carbon dioxide in the atmosphere that emissions must be reduced by <u>70 percent</u> worldwide. A 70 percent cut would mean lowering U.S. emissions to 1928 levels.

Gore has won the global warming debate—the world is warming as a consequence of human activity, chiefly the loading up of the atmosphere with carbon dioxide from burning fossil fuels. Yet he feels that he must exaggerate the dangers by propounding implausible scenarios in which sea levels rise 20 feet by 2100. He pretends that the science is settled with regard to the effect of global warming on hurricanes. And he pushes a scientifically tenuous connection between the spread of diseases and global warming. These are little inconvenient truths that cut against his belief that global warming constitutes a climate emergency. On balance Gore gets it more right than wrong on the science (we'll leave the policy stuff to another time), but he undercuts his message by becoming the opposite of a global warming denier. He's a global warming exaggerator.

I give An Inconvenient Truth a tepid 2 stars.

Disclosure: I own a small amount of ExxonMobil stock and I am looking forward to investing in biotech cellulosic ethanol production someday.

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