

The Battle Between Image and Reality

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Several events, including record snow falls in many parts of the country have brought climate change, also known as global warming, back to the public's attention. These events include the release of emails indicating manipulation of temperature data, admissions by the former head of the Climate Research Unit about recent and historical temperature, and the reluctant acknowledgement that the Intergovernmental Panel on Climate Change's (IPCC) last assessment report contained several glaring errors. The image, carefully crafted and marketed for over two decades, that temperature increases have been accelerating in recent decades, as a result of human activity, is now suspect. Without that image it is hard to convince the public that a climate apocalypse is likely later this century.

The image that human activity is radically changing our climate does not conform with factual data. The facts suggest claims about accelerating temperatures are an exaggeration and temperature records are of questionable accuracy.

The apocalyptic rhetoric about rapidly rising temperatures is matched with similar rhetoric about sea levels, flooding of small islands and coastal regions, increased drought, diseases, and other ecological effects. This vision of a dismal future pervaded the recent global climate meeting in Copenhagen. Here in the U.S. such images were used by the Environmental Protection Agency (EPA) to justify issuing an endangerment finding which alleges that temperature increases from carbon dioxide (CO₂) emissions are a threat to human health and the environment.

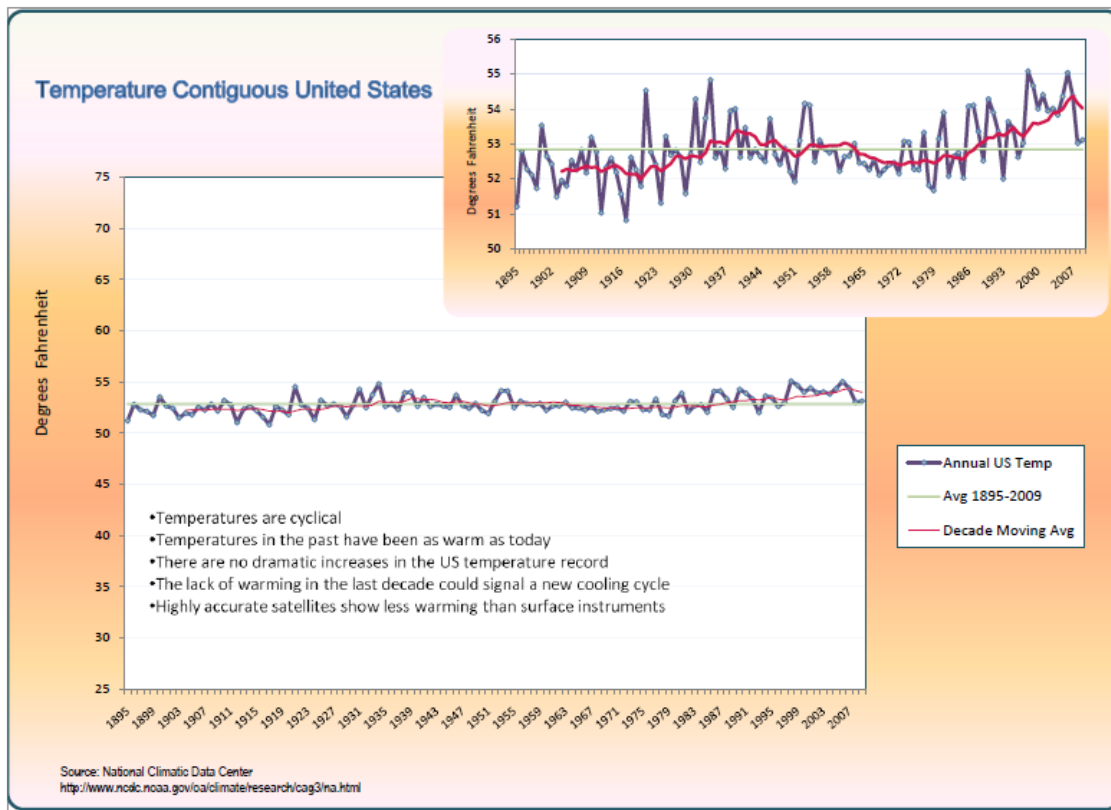
Whenever advocacy groups and the media use scary images, it is always wise to be more than a little skeptical and to check the underlying facts. All too often, the facts do not support the images. That is what led the late historian, Daniel Boorstin, to observe that we live in an age where facts get tested by the image instead of the image getting tested by the facts.

The image that the apocalyptics are touting is that our temperatures were like Goldilocks' porridge, just right until human activity caused them to increase rapidly because of fossil energy use to heat our homes, operate our businesses and power our cars. Are the facts consistent with the image? No. There have been periods in the earth's geological history when CO₂ levels and temperatures were higher than they are today. Our more recent temperature history provides empirical evidence that the earth is not experiencing run away warming and that there has been a cyclical pattern to temperatures, at least, over the past 115 years.

In the late 1800s, we were beginning to emerge from the Little Ice Age and our average temperatures were in the 51° range. Over the next several decades, they ranged between 52° and 53°. Then in the 1940s, temperatures began to decline and that brought concerns of another ice age. In the late 1970s, temperatures started increasing again, rising from 52.3° to a peak of 55.1° in 1998.

An increase of 3° in three decades would be worrisome if it indicated a new and continuing trend. But, that is not what has happened. Since 1998, which was an El Niño aberration, temperatures have begun to decline once again, dropping from the

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55.1° in 1998 to 53° last year. Professor Robert Balling, a well-known climatologist, has observed, “Confounding many glib assertions is the fact that the warming rate in the early twentieth century (1915-1945) is not significantly different from the warming rate of the past three decades.”

The temperature record since 1895 is a series of ups and downs with changes from year to year or decade to decade being measured in tenths or hundreds of degrees. And last year's average temperature was similar to what we experienced in the 1920s and 30s. The figure shows that temperatures have not increased in a manner consistent with the theory that human produced CO₂ is causing unprecedented warming and that temperatures in the past decade are not significantly different from temperatures early in the 20th century. The decadal data shown in the figure makes it clear that while the average temperatures in the most recent decades have been higher than past ones, the highs are not

dramatically higher than the 1920s or 1930s. It is also clear that over the past 115 years temperatures have warmed, cooled, warmed again, and now may be cooling again. Research by Dr. Roy Spencer of the University of Alabama, Huntsville shows a 30 year phenomenon known as the Pacific Decadal Oscillation could be a primary cause of the warming that occurred between 1976 and 1998.

There is another set of facts that further erodes the image of run-away warming. When dealing with annual changes in tenths or hundreds of a degree, the location of measuring stations, the type of devices used, and corrections made in data analysis can make a big difference. Changes in areas around temperature measuring stations can introduce biases that need to be corrected and newer measuring devices have to be correlated with readings of the ones that they replaced. Small errors in making these corrections can have big effects. About 20 years ago, mercury thermometers

were replaced by highly accurate electronic thermometers (thermistors). This switch made it clear that the older thermometers were understating temperatures by about two-tenths of a degree because thermistors record temperatures continuously and are more sensitive to periodic changes. So, reports of recent warming would overstate how much warming has actually taken place, unless there was a proper correction in the historical record for the change in devices. Professor Balling and John Christy of the University of Alabama, Huntsville have provided documentation that many land based temperature measurements have been in error.

As a result of the "Climategate" emails, we have learned a lot more about temperature measurements and corrections. The number of weather stations globally has been reduced, their location is not based on statistical design, and corrections for the urban heat island effect are less precise than we were previously led to believe. In addition, these temperature measurements only cover the earth's land mass or 25% of the earth's surface. Ocean temperature measurements have been even less precise until recent years. And, just recently, Professor Phil Jones, the former head of East Anglia's Climate Research Unit, admitted that there has been no statistically significant warming in the past 15 years, that warming from 1975 to 1998 could have been the result of natural influences, and that it could have been as warm during the Middle Ages.

The lesson to be learned from this summary of the U.S. temperature history is that things are not always the way they have been made to appear by the media or those who advocate a political agenda. Illusionists practice their trade in all walks of life.

There is no doubt the human activity, especially land use, has impacted our climate. There is no doubt that CO₂ emissions and concentrations in the atmosphere have increased over the past century. There is no doubt that it is slightly warmer today than it was at the beginning of the 20th century. And, there is no doubt about the wisdom of slowing the growth of CO₂ emissions, of using energy more efficiently, and of investing in new energy technologies. But, there should be a lot of doubt about accepting the certitude of a climate apocalypse and then using it to pursue a legislative course of action that would force CO₂

emissions to levels of the distant past and further damage an already weak and struggling economy.

To quote Voltaire, "doubt is not an agreeable condition but certainty is an absurd one."

As a result of the growing number of questions about the accuracy and integrity of past temperature records, there needs to be an open, transparent, and independent reassessment of our temperature record since the end of the end of the Little Ice Age because that record is the foundation for climate change legislation. A sound, sustainable climate policy must rest on a solid factual and scientific foundation. That does not exist at this time.

"The government is very keen on amassing statistics. They collect them, they add them, raise them to the nth power, take the cube root and prepare wonderful diagrams. But, you must never forget that every one of these figures comes in the first instance from the village watchman who just puts down what he damn well pleases."

Sir Josiah Stamp (1880-1941)