# Anthropogenic Global Warming

Before joining in the national political sport of name calling, backbiting, and sloganeering, the first question that one should clinically address is: 'are human activities responsible for the observed increases in world temperatures over the past century?' There is no real question that the earth is warming. Some really competent members of the human race, now with the help of earth-orbiting satellites, have gotten very good at measuring temperature.
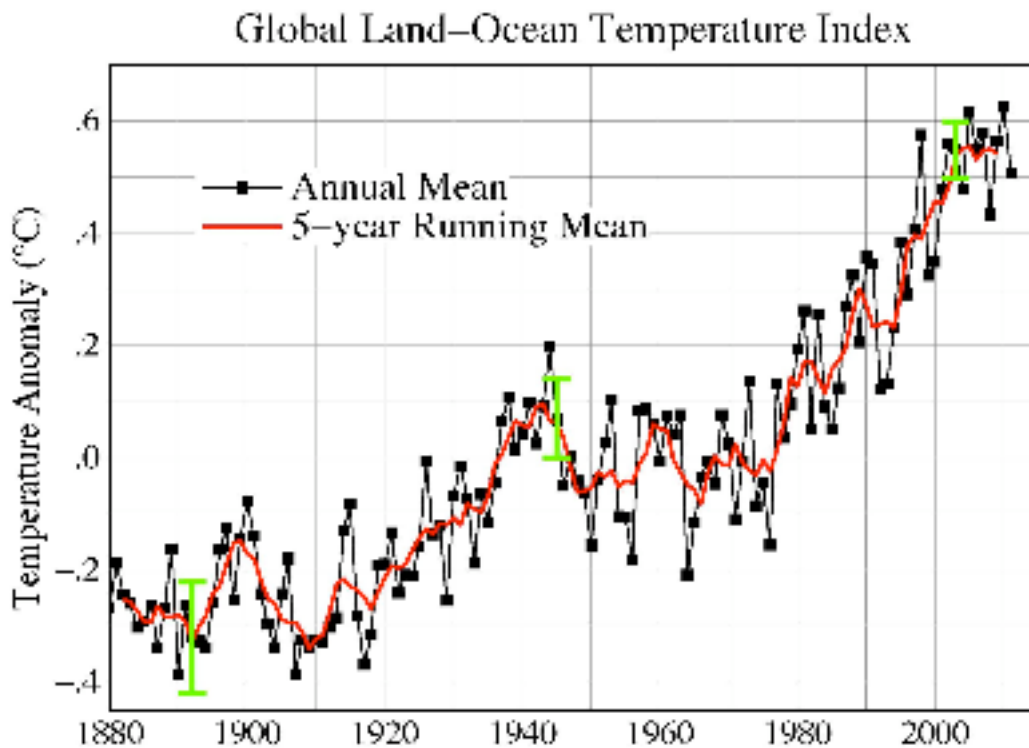
NASA: Goddard Institute for Space Studies

I am not qualified to answer that pivotal question. I am not even in the game. To really be 'in the game', one must actually examine historical data, read volumes of pertinent technical literature, develop and test one's own mathematically-based hypotheses, and, finally, publish the results of one's calculations and models in peer-reviewed scientific literature where they can be challenged and, possibly, refuted. From a strictly scientific standpoint, those who cannot or will not sacrifice the time required to formulate the problem in this fashion might be considered dilettantes, somewhat like the loud and shirtless fans criticizing the action at a football game.

Instead, in our democratic society, even with questions of this magnitude and complexity, we are inclined to put them to a public referendum. Pundits abound. Scientific illiteracy is no barrier. Even the third graders at elementary school may voice their opinions for the media.

For a politician, a decisively held opinion on the matter of global warming is essential. Often, for those dreading the economic impacts of mitigation, the answer to an anthropogenic warming component is a resounding 'No!'

Still, some concerned scientists and engineers have given the matter serious thought. After consideration, the American Chemical Society published their study group's consensus in a policy statement entitled, **Global Climate Change**.

In calling for the development and application of technology to *"cost-effectively* (most ACS members are keenly aware of the costs of energy and materials production) *protect the climate"*, the ACS policy statement argues that *"deploying these technologies would reduce energy costs, increase productivity, improve the U.S.'s energy independence, improve air and water quality, and reduce environmental hazards, in addition to reducing greenhouse gas emissions."* Considering the multiple ancillary benefits, one might imagine that government sponsorship of the application of these technologies would be welcomed even were greenhouse gases not reduced.

Addressing the probable impact of human activities, the ACS policy statement concludes: *"The overwhelming balance of evidence indicates that reducing greenhouse gas emissions is the prudent and responsible course of action at this time."* Moreover, *"ACS believes that public and private efforts today are essential to protect the global climate system for the well-being of future generations."*

However, pursuing a prudent and responsible course of action in America is difficult because, when facing a national policy involving a change in lifestyle (particularly, requiring conservation), many U.S. citizens do not respond solely as 'Americans'. Some super-elevate the economic interests of their state; some consider solely those of their city; others, still more narrowly, of their individual business or occupation; while the meanest among us defend our interests alone.

To the besieged administrator who adopts his primary accounting stance as 'defender of the state/community/business/university budget' rather than the steward of the future economic welfare of the nation, it might seem reasonable to not only oppose any measures which threaten to increase financial burdens, but, further, to argue that the problem is debatable -- and may not even exist.

It has always struck me as especially odd that many of us who most enjoy the prosperity brought by modern technology (and who also have faith that future technological developments will overcome current material and sociological problems), will turn to vilify those in that community of technologists when confronted with a message they prefer not to hear.

That seems a lot easier to do when you are not in the game.