

MIT Student

STS.003 Fall 2010

### The Impossible Climate Consensus

It was Pope Pius IX who said, “A system which is repudiated by history...by exact science, by the observation of facts... would seem to have no need at all of refutation.”<sup>1</sup> He was speaking out against the then- revolutionary theory of evolution that had recently been introduced by Darwin’s 1859 publication of “On the Origin of Species”. His statement seems an obvious one, and the converse seems equally as redundant; that a claim with the support of history, science, and fact, should have no need to further prove itself. Yet today, the theory of global warming (now termed “climate change”) faces constant controversy despite substantial factual evidence in its favor. Even in instances where observations regarding climate change cannot be denied, much debate still takes place regarding whether the change is attributable to human causes, and whether human reaction to the changes can make a difference. There are numerous opinions backing all sides of the dispute, most with educated sources providing convincing arguments for their own views. Yet the question of why such a hotly contested debate continues at all provides an interesting topic for examination.

According to an article by Naomi Oreskes and Erik M. Conway, the Intergovernmental Panel on Climate Change (IPCC) has effectively stated that the debate should be over, saying, “most of the warming observed over the past 50 years is attributable to human activities.”<sup>2</sup> This implies both a certainty that warming has

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<sup>1</sup> Professor David Jones, class lecture in STS.003, MIT, 04 October 2010.

<sup>2</sup> Naomi Oreskes and Erik M. Conway, “Challenging Knowledge: How Climate Science Became a Victim of the Cold War” in *Agnotology the Making and Unmaking of Ignorance*, ed. Robert N. Proctor and Londa Schiebinger (Stanford: Stanford University Press, 2008), 55-89, on 55.

occurred and that humans have been a large contributing factor. If the IPCC, an authoritative source on the issue, has issued such unambiguous statements, how then can the debate continue? The same Oreskes and Conway article goes on to cite polls indicating the general belief of the public that scientists continue to be in disagreement over the facts, with only a third of those polled believing global warming is caused by humans. Due to the fact that the climate change issue deals with future consequences on a global scale, the debate is not an easy one to reach public consensus on. Predictions from computer models, which provide a majority of data regarding climate change, can seem like abstractions to the general public. Additionally, direct effects of global changes aren't easily seen on an individual basis, especially when compared with an issue like smoking. The climate change debate is also susceptible to competing views of individuals or corporations. However, perhaps more interesting is the justification of conflicting viewpoints with different interpretations of science itself.

Australian paleo-climatologist Robert M. Carter provides a polarizing view on the issue of climate change in his article, "The Futile Quest for Climate Control". Carter's general claim is that there is no evidentiary support for human caused global warming, and that the observed climate changes of the past decade are merely part of a natural cycle. He attacks the scientific methods of the IPCC, and goes on to note the failure of the IPCC to utilize the entire geological context in their climate analysis, thereby invalidating their results. He further claims that; "...the proper null hypothesis that the global climatic changes that we observe today are natural in origin has yet to be

disproven.”<sup>3</sup> Carter is a skeptic regarding the use of projections from computer climate models by the IPCC in their data regarding climate change. He claims that these models have not been able to successfully predict trends, are overly reliant on highly variable parameters, and should not be used as impetus for policy making regarding climate change. He clearly does not feel that carbon dioxide emission limitations should be imposed.

An article presenting an opinion contrary to Carter’s is the position statement of the Geological Society of America, revised as recently as April 2010. While acknowledging the occurrence of natural climate variation, the Geological Society states that it agrees with the research of the IPCC and believes that “...global climate has warmed and that human activities (mainly greenhouse-gas emissions) account for most of the warming since the middle 1900s.”<sup>4</sup> They further state agreement with the proposal to globally reduce human carbon dioxide emissions in order to prevent further undesirable anthropogenic climate change from taking place. In an interesting counterargument to Carter’s claim of lack of geological data, this report cites geologic sources which provide data in evidence of definite higher temperatures in the end of the 1900s than during the previous four hundred years.<sup>5</sup> Furthermore, the Geological Society outlines the methodology used to assess today’s climate models which includes utilizing paleoclimatic studies of the earth’s history. They however, did not come to the same conclusion as Carter, that today’s trends are a natural and cyclic occurrence. In fact the

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<sup>3</sup> Robert M. Carter, “The Futile Quest for Climate Control,” available at <http://www.quadrant.org.au/magazine/issue/2008/451/the-futile-quest-for-climate-control> (accessed 10 Oct 2010).

<sup>4</sup> The Geological Society of America, “GSA Position Statement,” available at [http://www.geosociety.org/positions/pos10\\_climate.pdf](http://www.geosociety.org/positions/pos10_climate.pdf) (accessed 10 Oct 2010).

<sup>5</sup> The Geological Society of America, “Position Statement”.

Geological Society gives evidence to eliminate many long term natural causes that would otherwise be potential causes for warming trends, including changes to Earth's orbit and solar irradiance changes. The Society lists numerous effects they believe will come about as a result of this anthropogenic climate change, including loss of arctic ice, disappearance of glaciers and subsequent lack of runoff, stress on farm crops, increased soil erosion, ocean acidification, and ecosystem destabilization.<sup>6</sup> They go on to recommend public policy that reduces greenhouse gas emissions and invests in planning for adaptation to whatever adverse effects could come about as a result of the emissions already in the atmosphere.

In reading two sources on the same topic, especially two that both have such geologically based arguments, the chasm between the two opinions is remarkable. Examining the sources in more depth elucidates competing political and economic interests. To derail potential arguments of corrupt research funding or political tainting, Carter makes the interesting statement; "An idea is not responsible for those who believe in it, and neither is the validity of a scientific hypothesis determined by the character or beliefs of the person who funded the research."<sup>7</sup> This simple statement is Carter's way of conveniently trying to protect his climate change views from being criticized due to his own affiliations.

Robert Carter currently works as a research professor, having obtained a PhD in 1968 from Cambridge University. He has published numerous papers and in August of 2010 published a book titled *Climate: The Counter Consensus*. Carter presents his ideas

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<sup>6</sup> The Geological Society of America, "Position Statement".

<sup>7</sup> Carter, "Futile Quest".

in a convincing manner, and is obviously an educated scientist, well versed in his fields. Why then, does he produce arguments so contrary to widely believed scientific authority? While the IPCC, at least under Carter's analysis, could be called corrupt, "...the IPCC conclusions have been ratified by every major scientific society in the United States with pertinent expertise, including the American Geophysical Union, the American Meteorological Society, and the American Association for the Advancement of Science. Outside the United States, they have been affirmed by the Royal Society...and by a joint statement by the National Academies of Science of eleven nations..."<sup>8</sup> Thus it would seem that Carter's views must at least partially be in his own best interests, to so radically contradict such a wide agreement. Looking more into Carter's affiliations, potential motivations become clearer. For example, he is a science policy advisor for the Institute of Public Affairs, a conservative think-tank whose donors have included Exxon Mobile, and various Mining companies.<sup>9</sup> These donors have obvious interests in the climate change debate, as policy changes that limit or heavily tax fossil fuel use would severely hurt their businesses. However, perhaps most interesting is that "...his [Carter's] more general stratigraphic work contributes towards the research base which underpins the exploration for and development of sedimentary mineral deposits, including the important energy resources of coal, oil, gas and uranium."<sup>10</sup> So while Carter claims that ideas and the motivations of those who support them should not be co-considered, it very

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<sup>8</sup> Oreskes, Conway, "Challenging Knowledge," 57.

<sup>9</sup> On IPA funding, see <http://www.theage.com.au/articles/2004/11/26/1101219743320.html> (accessed 10 Oct 2010).

<sup>10</sup> On the biography of Robert Carter, see <http://myprofile.cos.com/glrmc> (accessed 10 Oct 2010).

well may be that he has a vested economic interest in continued research and use of fossil fuels.

The Geological Society of America was founded in 1888 by some of the early members of the American Association for the Advancement of Science, a group cited in a quote above to be in agreement with the IPCC conclusions on climate change today.<sup>11</sup> Their current president, Joaquin Ruiz, received a PhD in Geology, and has worked as the associate editor of the American journal of science, been a member of the National Research Council, and been a panel member of the National Sciences Foundation.<sup>12</sup> The prime sponsor of the GSA, as listed on their website, is Subaru of America.<sup>13</sup> Though one might expect car companies to have a vested interest in the opposite viewpoint, perhaps Subaru is attempting to portray an image of climate friendliness, to help their own public opinion.

It seems that the differences between these sources' views arise not from real differences in data, but from competing economic motivations, and the arguments are justified by opposing interpretations of valid science. The GSA readily accepts the widely believed theories proposed by the IPCC and related organizations, including the projections from computer models. Much of Carter's paper, however, is dedicated to highlighting the corruption of the study of climate change, including use of "selective science" to emphasize only certain data, and political biases. Carter also goes out of his way to bring up many of the arguments made against his viewpoint to try and disprove

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<sup>11</sup> On the Founding of the Geological Society of America, see <http://www.geosociety.org/aboutus/intro.htm> (accessed 16 Oct 2010).

<sup>12</sup> On the resume of Joaquin Ruiz, see [http://www.geo.arizona.edu/web/Ruiz/JR\\_CV\\_9-04.pdf](http://www.geo.arizona.edu/web/Ruiz/JR_CV_9-04.pdf) (accessed 16 Oct 2010).

<sup>13</sup> On the sponsorship of the Geological Society of America, see <http://www.geosociety.org/aboutus/sponsor.htm> (accessed 16 Oct 2010).

them. He believes that there can never be a consensus on an issue of science, because science by nature is constant skepticism and testing. Carter seems to treat the fact that there is such a consensus as a reason to not believe the same theories. He even references the time of Galileo, when the “scientific consensus” was based on the desires of the church instead of real research. Carter believes all scientists must be skeptics, and feels that those in the position of the GSA are blindly following the herd. Carter is very stringent in his definition of a scientific truth, which he says stands only when “...it is formulated as a rigorous hypothesis that has survived testing by many different scientists.”<sup>14</sup> This is why, when defending his own point of view, Carter purposefully emphasizes the most how there is no evidence to directly disprove it. However, a reading of the GSA position statement using Carter’s own definition of science seems to validate the GSA’s stance. Their claim that anthropogenic climate change has occurred is certainly a hypothesis, and they cite many different sources of data that do seem to confirm their argument and invalidate Carter’s. They reference not only climate models, but the geological record, ground station measurements, and satellite data.

The climate change debate continues to exist in the face of wide consensus because there are those who want it to exist. There are groups and people like Robert Carter, who for reasons varying from differing views on the nature of science itself to different economic motivations, want the public to remain unsure of what to believe. Ultimately the public decides who is voted into political office, where policy changes can be made. Thus, affecting public opinion and causing uncertainty (much like the Marshall

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<sup>14</sup> Carter, “Futile Quest”.

Institute of the Cold War era) can truly change what is done about global issues such as climate change.

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STS.003 The Rise of Modern Science  
Fall 2010

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