Ninety Seven Percent Is Not What You Think

By Art Horn

I have given many lectures about the myths, misconceptions and outright lies in the global warming arena. After an hour of graphs, charts and pictures detailing how a tiny trace gas, carbon dioxide, has no relationship to whatever warming and cooling has occurred I get the inevitable statement from someone in the audience. "How can you deny that man made global warming is real when 97 percent of climate scientists agree that it is true?" At this point I have to explain that the 97 percent figure is not what it appears to be.

Let's start with where this number comes from. One of the most quoted sources is the result of an online survey that was published in 2009 by Peter Doran and Maggie Kendall Zimmerman from the University of Illinois. The survey was sent to 10,257 scientists. It was intended to be very easy to respond to and was supposed to take only two minutes to complete. As a result 3,146 scientists responded to the survey.

There were nine questions in all but the two primary questions in the survey were these. Question number one: When compared to pre-1800 levels, do you think mean global temperatures have generally risen, fallen, or remained relatively constant? Of the 3,146 respondents 90% said risen. Herein lies one of the flaws in the survey. This is a loaded question. During the past 2,000 years the earth has had well documented swings in average temperature. At the beginning of the Roman Empire the earth was as warm or warmer than today. This warm spell is known as the "Roman Warmer Period" and extended from about 250 BC to 450 AD. Rome fell during an era when the temperature was turning colder, know as "The Dark Ages Cold Period" from about 450 AD to 950 AD. This cold spell finally gave way to a more agreeable temperature rebound known as the "Medieval Warm Period" from about 950 AD to1400 AD. Hundreds of peer reviewed papers have confirmed that this warm period was as warm or warmer than today's temperature. After this warm spell the earth cascaded into a prolonged cold era know as "The Little Ice Age" that lasted from about 1400 to 1850 AD. Studies indicate that the bottom of this cold period was around 1700 AD. Since that time the global average temperature has risen. I know of no meteorologist, climatologist or anyone involved in the study of the earth's temperature who would argue this point.

The survey question: When compared to pre-1800 levels, do you think mean global temperatures have generally risen, fallen, or remained relatively constant, was intentionally worded to elicit the response the authors wanted to hear. It was the intent of the question to get a response of "risen". A loaded question if I have ever seen one. Amazingly the response was not 100%! In fact only 90% of the 3,146 answered "risen" to question one.

Question number two is even more suspect. The question is: Do you think human activity is a significant contributing factor in changing mean global temperatures? Of the 3,146 respondents only 82% answered yes to this question. This means that taken together the

percentage response to the survey was not 97% but 86%, a significant majority but not nearly as impressive as a 97% figure.

Question two has several vague areas. First is just what constitutes "human activity"? The burning of fossil fuels to make energy is one. The changing of land surfaces to make cities, farmland and deforestation is "human activity" that can change temperature as well. Changing mean temperature can be accomplished by changing the environment around a climate recording station. This is also "human activity". As rural climate recording stations are gradually surrounded by urban sprawl and eventually larger buildings and infrastructure, the temperature of the site will warm due to the "Urban Heat Island (UHI) effect. This has nothing to due with fossil fuel use increasing the efficiency of the green house effect but is a significant "human activity" that can change the temperature of a recording station over time. The results from the survey do not address the variety of just what constitutes "human activity". A "yes" response to question two implies the responder is referring to fossil fuels but that is not necessarily the case. It is however, what the survey likely wanted to convey.

Question number two also does not address what the word "significant" means to each individual respondent. What constitutes "significant" can be very different from person to person. To some a 50% human influence on the temperature increase of the last 150 years would be significant. To another scientist a 25% human contribution to the temperature increase would be significant. And to another a 10% increase in the global temperature due to human activity would be significant. This range of possible interpretations to the word "significant" makes the 82% response more suspect.

The 97% figure from the survey comes from a whittling down of the accepted number of responses from 3,146 to 79. The 79 scientist are those that said they have recently published 50% of their papers in the area of climate change. Of these, 76 of 79 answered "risen" to questions one (96.2%). How this number is not 100% is very strange. As to question two 75 of 77 answered "yes" (97.4%). As I have shown above this response does not necessarily mean that the respondent was attributing the significant human activity to the use of fossil fuels. Additionally a "yes" response does not quantify the degree of significance that human activity has on climate change. This can range significantly from person to person.

It is interesting that of the 36 meteorologists who responded to question number two, only 23 of 36 or 64% thought that human activity was a "significant contributing factor in changing mean global temperatures". The authors dismiss this group of trained atmospheric scientists outright even though their size is almost half of the 79 climate scientists used in generating the 97% figure! Apparently the 64% number was not convincing enough. If the authors of the survey had combined the results of the meteorologists and the climate scientists the "yes" response to question two would have been 98 out of 113 or 87%. That number just doesn't have the same impact as 97%.

The Global Warming Petition Project has been signed by 31,487 scientist including 9,029 with PHDs in their fields. The petition states that: "There is no convincing scientific

evidence that the human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth". It would appear that there are many well educated people who do not agree with the survey and its 97% figure.

This year, 2012, is a critical period in the history of the United States. The choice of who will lead us to or from energy freedom and economic prosperity will come this November. If we go in the wrong direction or in other words, the direction we are heading in now, by 2016 it may be too late to recover. The fear of man made global warming is being used to shape a dangerously flawed energy policy. If voters make their choices based in part on misleading surveys like the one above we will fail. The result will be national and world wide upheaval that could have devastating effects for everyone. We must be allowed to develop our fossil fuel resources here at home. Abundant, affordable energy is the key to prosperity and peace.