Philadelphia Inquirer

Oct. 25, 2011

Let's prize climate skepticism

By Swaminathan S. Anklesaria Aiyar

The latest Nobel Prize for chemistry has confirmed what science students are taught early on: that all scientific theories are intrinsically uncertain; that science progresses through skepticism and attacks on existing theories, and that successful attacks are sometimes rewarded with Nobel Prizes. It follows that skepticism about global warming, far from being antiscience, is in keeping with the standard scientific approach - and could one day fetch a skeptic a Nobel Prize.

The Nobel for chemistry was awarded to the Israeli scientist Daniel Shechtman for his discovery of "quasicrystals," which violate standard theories about crystals. Scientists had believed that all crystals form in repeated periodic patterns, and commercial production of crystals was based on that understanding. But Shechtman exploded the conventional wisdom by discovering quasicrystals, which form regular patterns that never repeat.

When Schechtman first announced his discovery, his superiors were scornful, telling him he should review his basic chemistry textbooks. When he persisted, he was asked to leave his research group. His first paper on the topic was rejected by the Journal of Applied Physics. But Schechtman persevered, and he proved that what 99.9 percent of scientists believed was wrong.

Sound familiar? We keep hearing that 95 percent or 98 percent of scientists believe catastrophic, man-made global warming is proven. Climate skeptics are widely denounced as science deniers. However, as Schechtman showed, 99 percent of scientists can be and have been wrong.

Science proves nothing beyond all doubt. Rather, it progresses by knocking down existing theories in favor of better ones, which in turn are subject to fresh attacks. Skepticism is at the very heart of the scientific method. The scientific approach is at odds not with climate-change skeptics, but with those who claim global warming is completely proven, contestable only by madmen and blackguards paid by oil companies.

A recent experiment at the CERN laboratory in Switzerland is casting doubt on another idea believed by about 100 percent of scientists: Einstein's theory of relativity. CERN scientists have found particles called neutrinos that seemed to have traveled faster than light, challenging a fundamental plank of modern science. According to the theory of relativity, a particle traveling faster than light will go backward in time.

Environmentalists denounce climate skeptics as science deniers. But have the CERN scientists been denounced as Einstein deniers? No. The scientific community is shocked by the discovery but keeping an open mind - even about something as firmly established as the theory of relativity.

To say 95 percent of scientists believe in global warming suggests, incorrectly, that the skeptics are loonies. In fact, they have included Nobel laureates such as Ivar Giaever, Robert B. Laughlin, and Norman Borlaug. Giaever recently resigned from the American Physical Society in protest against its insistence that global warming is "incontrovertible." He declared, "The claim ... is that the [global average] temperature changed from 288.0 to 288.8 degrees Kelvin in 150 years, which (if true) means to me . . . that the temperature has been amazingly stable."

The most scientists know about the climate is not much. They know so little that they can't predict the next drought or El Niño. When they try to predict temperatures a century hence, it's a real stretch.

When people know only a little about a topic, they tend to make a lot of the little they know. The little in this case is that rising concentrations of greenhouse gases will raise temperatures if other things remain constant. But other things are not constant; they vary in ways we do not fully understand.

That's why we cannot say why temperatures were high in the medieval period despite low carbon dioxide concentrations. It's also why the U.N. Intergovernmental Panel on Climate Change does not make a definite prediction of future temperatures, instead positing six scenarios ranging from benign to catastrophic.

We know so little about the climate that we can't rule out the possibility of a catastrophe. So we can discuss how much insurance we should buy to cover a disaster that may never happen. But that's different from planning for certain disaster.

Answering the insurance question requires massive funding of research not just by proponents of global warming, but also by skeptics - the breed that has repeatedly won Nobel Prizes for overthrowing the existing orthodoxy.