



Untangling media messages and public policies

Everyday, we are bombarded with messages based on science: the nightly news reports on the health effects of cholesterol in eggs, a shampoo advertisement claims that it has been scientifically proven to strengthen hair, or the newspaper reports on the senate's vote to restrict carbon dioxide emissions based on their impact on global warming. Media representations of science and science-related policy are essential for quickly communicating scientific messages to the broad public; however, some important parts of the scientific message can easily get lost or garbled in translation. Understanding the nature of science can make you a better-informed consumer of those messages and policies. It can help you:



- separate science from spin
- identify misrepresentations of science, and
- find trustworthy sources for further information.

To demonstrate how this works, we'll look at a set of questions that you can use to get to the science behind the hype:

Your Science Toolkit: Evaluating Scientific Messages

- ③ Where does the information come from?
- ③ Are the views of the scientific community accurately portrayed?
- ③ Is the scientific community's confidence in the ideas accurately portrayed?
- ③ Is a controversy misrepresented or blown out of proportion?
- ③ Where can I get more information?
- ③ How strong is the evidence?

As an example, we'll apply these to a hypothetical article relating to global warming that might have appeared in a major newspaper in the early 1990s ...



Ice cores offer clues to global warming question

An international group of researchers working in Tibet have recovered new clues about Earth's ancient climate. These clues come in the form of ice cores taken from the Guliya ice cap, which are believed to contain information about the components of the atmosphere over the last 200,000 years.

The scientists are beginning analysis of one of the three cores recovered by the expedition last summer. Lonnie G. Thompson, leader of the research team, said that this core could reveal new insights about Earth's climate through the last four ice ages.

A better understanding of these climate patterns will inform the so-called "global warming" debate.

Some scientists believe that human-produced carbon dioxide is causing Earth to warm dangerously. This view is supported by some ice core studies. However, skeptics question this opinion, arguing that we lack evidence that the warming is not simply a natural part of the planet's climate fluctuations.

Ice cores contain atmospheric "fossils"—bubbles of preserved gases and dust from different times in Earth's history. Thompson explained that "These long-term archives will let us look at the natural variability of the climate over long periods ..."

Another ice core taken from Antarctica has suggested that carbon dioxide levels and temperature have increased and decreased in sync over the past 160,000 years, rising to unprecedented levels today.

However, scientists have not yet come to a conclusion regarding the main question inspired by the ice core data: Do higher carbon dioxide levels actually cause temperature increases?

To see how the article measures up against our set of tips, read on ...