What is science?

The word "science" comes from the Latin *scientia*, knowledge. Science is the pursuit of knowledge. It is a uniquely human activity (until we meet aliens who are similarly inclined). No other animal on Earth does it; it is a product of the human intellect.

This recognition must underlie *all* scientific reporting. *All* scientific activities are done by people. *All* scientific writing is written by people, for people. Therefore all science reflects the qualities of the people who do it and the needs of those who will be affected by it. You cannot remove the actor and pretend that the work just happened. You cannot claim that the actor is unimportant because the results would have been the same regardless of who did the experiment—conflicting results of drug trials give the lie to this belief. The convoluted passive sentences written in the third person that suggest that the work did itself obscure the reality of science. The actor is not only important, he or she is *essential*.

So when you are editing lifeless scientific prose, put the actor back in. Celebrate the pinnacle of human achievement that is science. Turn to the section on "Active versus passive voice" for an explanation of how to breathe life back into lifeless prose.

Substantive editing

The most difficult and interesting problems in editing are the substantive ones. So what is substantive editing?

Substantive editing (also known as developmental or comprehensive editing) is the editing of *substance*, not just the mechanics of writing. As with any other type of editing, its purpose is to make the work readable. It covers the basics of copyediting, including spelling, punctuation, grammar, flow, scientific conventions, style guides and appropriate vocabulary. But it goes further, covering meaning, logic, clarity, facts and correctness, consistency (internal and with the literature), coherence, completeness, structure, sequence, intended use and intended readers. It can even involve rewriting where necessary.

Jean Hollis Weber (http://www.jeanweber.com/howto/substant.htm) writes: "Substantive editing is almost entirely analysis-based, whether at the document level or at the paragraph, sentence, or word level. Decisions require judgement, not just the application of rules, and therefore should be negotiable with the writer."

The Canberra Society of Editors (1994) writes: "Substantive editing aims to ensure that the structure, content, language and style of the document are appropriate to its intended function and readership."