ROUND TABLE

Some scientific writing traps

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It was with a sigh of relief that I read the articles in the May 1993 issue of *TLE on ways* and means to improve scientific writing. I'm relieved to discover I'm not the only one who has (on numerous occasions) struggled through a difficult paper only to painstakingly discover that it dealt with a simple concept that had just been "written difficult." I particularly liked Gregory Bryan's suggestion that writers should get right to the point and keep it short.

It is my belief that most scientists are capable of communicating effectively. The problem is not necessarily rooted in a lack of ability to write clearly but, I would suggest, in a lack of motivation. In fact, it appears that many scientists feel a powerful drive to write in the most complex way possible. The "clarity-phobia" seems to be particularly prevalent among academics. As Dean Clark said in his article, a university would be. reluctant to accept a doctoral dissertation written in simple language. The question that comes to my mind is *Why?* What legitimate end is served by writing in "scholarly" language.

When I read a scientific article, I do so to become informed of the subject matter therein, not to be impressed by the expansive. vocabulary of the author.

But, let us return to the question at hand. What insidious and twisted motivation leads a perfectly good scientist, whose role in society is to advance our understanding of nature, to deliberately confuse and waste the time of his or her readers? I do have a theory, of course.

I believe there are a number of traps or "syndromes" into which certain scientists tend to fall. These are as follow:

The Thick Report Syndrome. No scientist likes to sum up a year's work in a few sentences. This is particularly true if the results were not earth-shaking. (Although a lot of geophysics is by its very nature "earthshaking.") Another contributing factor is the money factor; if a study cost a million dollars, then the report better (expletive deleted) well look like it contains a million dollars worth of words.

The Publish or Perish Syndrome. Many scientists who depend on government grants become infected with this horrible affliction. The overriding goal becomes to generate as many papers as possible from the same data set. This necessitates the use of the most obtuse and tedious verbosity imaginable, so that the reader will be much less likely to recognize the redundancy. With luck, the author is considered prolific.

The Thick Resume Syndrome. The idea here is to maximize the number of papers listed in your curriculum vitae. Potential employers can, however, protect themselves against this ruse by asking for a list of papers in which the author of the resume is listed in the bibliography.

The Mystical Syndrome. This one is often hard to spot. It is based on the premise that if there are certain aspects of your work that remain just beyond the grasp of understanding, the work and (hopefully) its author will assume a certain mystical quality. This, of course, is an admiible quality in poetry but is essentially counterproductive to the expressed goals of science.

The Exclusive Club Syndrome. The fewer people that understand your work, the more exclusive your club. This philosophy may have been useful in Galileo's time (to keep him out of prison), but it is perpetuated today in the spirit of unenlightened self-interest.

There are perhaps other afflictions and hidden agendas which tend to infect the mind with "pedantarrhea", but I'11 leave their identification to others. The important point here is that all scientists should recognize that unnecessarily complex writing retards the dissemination of knowledge and frustrates the nobler goals of science. I believe that one of the important goals of science today should be to integrate the knowledge of different fields. This is becoming increasingly difficult as specialization intensifies; so let's not compound the problem by writing to impress rather than to inform.

So what can we do about it? Develop a code of ethics that requires scientists to write with maximum clarity? Initiate a series of annual raspberry awards for the most confusing sentence, paragraph, or paper? Write. letters to university presidents and prestigious scientific magazines? Whatever we do, we need to get this simple message out... *clear and concise scientific writing is good; long-winded and confusing scientific writing is bad* LE