



## The Red Pencil

Writing is something we all do. In most cases we do it well enough for others to understand us. With e-mail we are probably writing more than ever. And some of it, I find, is pretty good, despite the need for brevity and speed. We have recovered an informality that was lost when we stopped writing letters. With the exception of e-mail, the writings of most optical engineers are confined to proposals, internal reports, and, if we are lucky, manuscripts for journals, such as *Optical Engineering*.

It is the variety of ways that we can express ourselves that I find most fascinating about English. As a sports reporter in high school and college, I found that I needed that variety to describe the baseball or football game I was covering. Because a sporting event consists of a narrow range of actions and reporting, a writer is required to come up with synonyms and turns of phrase to make the event come alive. And he or she must use them to generate a rhythm that carries the reader along.

But one of the problems with English arises from this variety. The language is so elastic, so varied, that it can lead to confusion, if not downright contradiction. Take, for example: "The oversight committee charged the bank's accountant with a gross oversight." In the first instance, "oversight" means a supervision of the bank's finances and in the second instance it means almost the opposite, a careless mistake. Yet, despite the difficulties caused by multiple definitions of some words, English has become the language of international commerce, the Internet, the airline industry, and many other crucial areas of modern-day life.

It seems to devour all other languages. If there is no expression in English, a foreign term will be incorporated. Nothing in English, certainly not the word "boredom," quite expresses the feeling described by the French term "ennui." So, a place is found for it in the English lexicon. This opportunistic approach gives the language a vigor and variety that ensures its life. Of course, it doesn't hurt that many popular songs and videos are in English.

In the last half of the twentieth century the English language has become the medium of expression for technical information also. Whether it is at conference talks,

in written proceedings, or in refereed publications, such as this one, the medium of expression is predominantly English. For some of us this has not always been true. Most of us who graduated in the '60s still had to pass a written language exam as part of our Ph.D. requirements so that we would be able to read scientific papers in another language. There was a time early in my career that I did read some papers in *Annalen der Physik* for some early work in absolute Raman scattering cross-sections. There was a time when a few of the papers in *Applied Optics* were published in French. But no more. The language requirements have been dropped in most graduate schools, *Applied Optics* requires that articles be submitted in English, and, for me, it has been a long time since I have had to open an English-German dictionary for my research.

The last statement is just a fact, not a matter of pride. One thing that has been gained is a precision arising from the fact that the same term to describe a concept is understood by everyone. While the standardization of English as the language of technical communication is a good thing, something is nevertheless lost. A sense of respect for other cultures through the reading of their language is no longer practical.

One of the problems that I have encountered in editing *Optical Engineering* has been the quality of writing in a fair number of papers submitted during these past two years. At first, I assigned for review all papers without regard for the quality of writing and left the critique of writing to the reviewers. But it became clear that many potential reviewers wouldn't evaluate a poorly written paper because it was so difficult to read. I don't blame them.

Lately the SPIE journals editorial staff has been scanning additional pages of the manuscript so that I can get a better feel for the quality of writing beyond the abstract before I assign an Associate Editor to the paper. Based on my ability to understand and follow the initial exposition, I can decide whether to assign the paper or return it to the authors without review with an appropriate explanation. Although this may seem a bit severe, I believe the authors and the reviewers will gain in the long run because the reviews will be more timely and we do not place demands on our reviewers that make their evaluation more difficult.

The cardinal rule for submitting to any journal is: Never send a paper to a journal that has not been re-

viewed by one or more knowledgeable colleagues. A reading by another person familiar with the topic, but unfamiliar with the paper, can reveal logical errors, misinterpretations, unclear writing, and outright mistakes that have escaped the authors. Traditionally, the sports editor marked up my game reports with a red pencil. Nowadays, the red pencil has been replaced by comments in a word processor document. However it is done, someone has to provide authors with guidance when they go astray. Even these editorials are reviewed by my Managing Editor, Karolyn Labes, and by Eric Pepper, SPIE's Director of Publications. I am not required to do this, but I would be an idiot not to take advantage of the editing skills of two people I trust. They have saved me several times from silly errors and have improved the expression of ideas.

For non-English speaking authors the need to review is even more important. If an author is not fluent in English, then he or she should find someone who is. When I was on sabbatical in Finland, I reviewed a number of papers for my colleagues there and believe this helped them improve their papers. I found that there is usually someone on the campus or in the company or institute who could be called upon to review papers on a regular basis, if only for language and expression. However it can be arranged, authors of technical articles should seek a fresh pair of eyes and an unbiased attitude toward what they have just written. Their pencil may not be red, but their function is just as valuable.

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