C On scientific writing:

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L have just finished the unusually contemplative task of reviewing several articles on the "science" of scientific writing. It sounds sensible, doesn't it, that scientific writing would require such erudite reasoning as to yield a "science" of its own when performed? I wonder, though, if it really is that sensible. Perhaps scientific writing is no different in essence than other types of writing which, for the most part, are more typically regarded as "art" when done well.

Whether art or science, there's a serious movement afoot to elevate the stylistic quality of such writing in today's technical journals. Editors are investigating new ways of making scientific writing more interesting and dynamic; new ways of standardizing these fresher approaches once they're discovered; and, most especially, new ways of ensuring that readership of such writing doesn't flag any further than it already has in recent years. It is a noble challenge since most would agree (I think) that reading today's literature can often be a study in pure tedium. I'm a bit concerned, however, that efforts to construct some unifying literary formula, through which we can all achieve eloquence, will lead our editors into a rathole of overanalysis- a place where many of us in the technical professions already spend too much time.

George Gopen and Judith Swan, two linguistic specialists, recently reopened this age-old discussion with a provocative article published in the November-December 1990 issue of *The American Scientist* with the title *The Science of Scientific Writing*. This article was a lengthy discussion of the habits and shortcomings that many of us suffer when trying to report on our research. Dean Clark's preceding article nicely summarized most of the salient points of the Gopen/Swan analysis, so there's little need to reiterate in detail. Their major point, to my mind, is that all too frequently we tend to sabotage our own efforts at communicating with potential



Evidence of burning curiosity; thoughtful investigation; introspection; persuasive argument. These are the kinds of catalysts that not only connote importance about a piece of work, but

ultimately advance the body of knowledge as well. These are the very things missing from so much of today's scientific communication.

Needless to say, if you can bring these elements out with your scientific writing, then you will no doubt have exceeded the norm. I think it's best if we simply appreciate the fact that everybody has their own way of thinking, speaking, and writing...and also forget about shoehoming our reporting into some prefabricated formula. Just say what you need to say in your own words and in your own way. Report with conviction and place your analysis against the backdrop of your own personal experiences. You may not win any awards for style, but you're much more likely to have clearly communicated your observations and also to have persuaded your reader that your conclusions are worthy of consideration. After all, that's what really is important, isn't it?

Post script. Here are three suggestions that have often helped me to engage in more persuasive communication on occasions when it was necessary to crawl out from under my own rock and tell others what I'd been up to. Perhaps others will find them useful as well. • Whatever you've been working on, just tell it like it is in your own words. Get right to the point and keep it short. Don't over-sterilize, don't over-caveat.



• When writing, look directly into the mind's eye of the reader and tell it like it's important for people to know. To accomplish that, share not just the facts but also the experience. Don't bother saying what you don't believe and can't back up with either solid proof or sound speculation.

• If doubtful about something, confess it. Don't be afraid to ask questions or to leave questions unanswered.

I like to think of it this way. Science is a vehicle with which we pursue truth. Scientific writing is the journal of our travels. Be honest. Share the experience and don't forget to write with conviction and subjectivity.

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