cern with style discourages the use of methods that will help graduate students to think and write logically. The problems in scientific writing are more difficult than Baker seems to think; they are not solved simply by trimming the word count.

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I would like to take Sheridan Baker to task for his misleading and besidethe-point review of Trelease's How to Write Scientific and Technical Papers. The book is admittedly not a flawless literary masterpiece. It does contain sentences whose style is less than superb. But Trelease had important things to say and, in general, said them with admirable lucidity and conciseness. He could, for example, compress into three pages the essential points for a full year's graduate seminar on scientific method. Should we nip at the heels of such a writer when his prose has an occasional lapse from grace?

Trelease would have declined, as I do, to join issue with Baker over style in scientific prose. What is wrong with bad scientific writing is less the style (which ranges from deplorable to good) than the illogicality of thought underlying the words. Trelease, almost alone among authors of books on scientific writing, tackles this illogicality head-on and gives profound yet practical advice for correcting it; that is why his book is important. Let us concentrate on such serious matters, and not get distracted by squabbles over elegance.

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Baker makes a number of excellent points, for example about the distressingly frequent occurrence of unnecessary repetition (tautology) in scientific writing, but by his own estimation of 10 cents per published word, was his \$162.90 review worth the money?

Baker attacks the use of nouns as adjectives, describing "nouniness" as an infection of modern writing, and laments the use of such titles as "Council of Biology Editors." Yet I am somehow sure he would not object to a "Council of Physics Editors" (physical editors?) or a "Council of History Teachers" (historical teachers?). Perhaps he just dislikes biology editors and wishes to deny them the right of council.

Baker is but one of a legion of teach-

ers and editors trained in English or journalism who condemn scientists for their supposed semi-illiteracy. Even if we grant a benevolent motivation for these endless criticisms, it should be understood that the critics have not been subjected to the metamorphic forces of scientific training and are therefore congenitally unable to grasp the essence of scientific writing: persuasion.

The direct voice, the first-person pronoun, and brevity are all desirable in general exposition or when one is writing for laymen. But in the primary scientific literature, the passive voice, the transparent anonymity of the author, and even the evasive verbiage are functional and purposeful. In a paper "Information, communication, knowledge," presented at the September 1969 meeting of the British Association for the Advancement of Science and reprinted in *Nature* (25 Oct., p. 318), J. M. Ziman, made the following perceptive observations:

A scientific paper is . . . a cunningly contrived piece of rhetoric. It has only one purpose; it must persuade the reader of the veracity of the observer, his disinterestedness, his logical infallibility, and the complete necessity of his conclusions. . . [Scientists] favour the passive voice, the impersonal gender, and the latinized circumlocution, because these [permit them to make] relatively positive assertions in a tentative tone. . . This sort of shyness is not just a trick for escaping when one turns out to be wrong; it is a device of "inverted rhetoric" by which an apparently modest and disinterested tone enhances the acceptability of one's utterances.

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Greatest of These Is Charity

Luther Carter in "Foundations and the tax bill" (5 Dec., p. 1245) . . . suggests that provisions of the tax bill with respect to foundations pose a threat to private philanthropy, and the only argument he presents against private foundations is that there have been "some abuses." For the most part private foundations are themselves a threat to real private philanthropy. To me, real philanthropy is getting money into the hands of actual operating educational institutions and other charities. This can be done directly. In all but a few cases gifts are more effective if they are handed directly to the charity. To filter them through a private foundation accomplishes nothing, except perhaps to bolster the pride of the donor who can boast of his "own foundation." In addition, most donations to private foundations seem somehow to get stuck in the "filter." Today literally billions of dollars are tied up in private foundations which amount to little more than investment companies—while our operating institutions starve for capital and operational funds.

Recently I went through the Oregon Attorney General's list of philanthropic trusts and foundations and selected at random ten of a private character showing together total net assets of over \$1.5 million. This was book value; actual cash value was probably many times that. Over the previous year these ten "charities" had paid out a total of exactly \$1953 for charitable purposes—an average payout of 11/4 percent on book value. During the same period, two of Oregon's eleven accredited independent colleges were forced out of business by lack of funds, and a third is faced with closure. That's a casualty rate of more than 25 percent. Had the assets of just those ten foundations and trusts been divided up among the three colleges all three would have been saved. That's how "private" foundations can choke off real philanthropy.

In addition, as I think almost anyone who has dealt with them can testify, there is a certain arrogance which characterizes the trustees and administrators of most private foundations. Almost to a man, they presume to know more about how monies for education and research should be spent than do the faculties and operating heads who are struggling to keep our independent institutions alive. This is why virtually every application to a private foundation has to be cast to appeal to some particular bias of the foundation's administrators and trustees instead of (as would be more appropriate) concentrating on the real monetary needs of the institution.

A strong case could be made for doing away with nearly all private charitable trusts and foundations and for requiring that deductible charitable gifts be made directly to public or operating charities, of which there are many tens of thousands serving almost every conceivable charitable purpose.

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