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THE ADVANCEMENT OF SCIENCE

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Bad Writing

In an address at the Christmas meeting of American historians, Barbara Tuchman quoted the opening passage of a paper presented at the AAAS annual meeting as an example of bad writing. Such examples are easy to find, and some, we regret to say, appear in *Science*. A sentence or two from *Science* has occasionally been reprinted by the *New Yorker* for the amusement of its readers.

The *Lancet* once quoted this confusing mess: "Experiments are described which demonstrate that in normal individuals the lowest concentration in which sucrose can be detected by means of gustation differs from the lowest concentration in which sucrose (in the amount employed) has to be ingested in order to produce a demonstrable decrease in olfactory acuity and a noteworthy conversion of sensations interpreted as a desire for food into sensations interpreted as a satiety associated with ingestion of good." What all of this means, the *Lancet* interpreted, is: "Experiments are described which demonstrate that a normal person can taste sugar in water in quantities not strong enough to interfere with his sense of smell or take away his appetite."

Scientists, educators, government officials all have their jargons. Fads abound. Authors strain for effects. Long words replace short ones. And ignorance, carelessness, a false idea of what constitutes proper scientific or scholarly style, overuse of the passive voice, and kindred sins all make unnecessary trouble for the readers whose interest the authors hope to arouse. Sir Ernest Gowers, one of the best guides to clear writing, has said of writing such as the *Lancet* quotation, "The fault of writing like this is not that it is unscholarly but that it is inefficient. It wastes time: the reader's time because he has to puzzle over what should be plain, and the writer's time because he may have to write again to explain his meaning. A job that needed to be done only once has had to be done twice because it was bungled the first time."

Fortunately there is hope and opportunity for improvement. Current interest in improving school instruction can lead to greater insistence that students learn to write clearly. A College Entrance Examination Board study entitled *The Measurement of Writing Ability* presents persuasive evidence that teachers agree reasonably well on the writing ability of students if they have adequate and varied samples to judge, and that colleges can depend upon scores on the English Composition Test "as valid indices of their candidates' ability to write." The Council of Biology Editors is developing a short and intensive course to be taken by graduate students at the time they first begin to prepare reports for publication. Much can also be accomplished by self-instruction with the aid of some of the fine guides that are available; Fowler's *Modern English Usage*, Gowers' *Plain Words*, Strunk's *The Elements of Style*, and Trelease's *How to Write Scientific and Technical Papers* are good examples.

With the help of such guides and with a willingness to work critically over his own drafts, seeking simpler and clearer ways to express his ideas, an author can improve his writing and help readers to understand his ideas more easily and accurately. Anyone can start his own self-instruction course by simplifying this cluttered and cliché-ridden paragraph:

With respect to the overall writing situation in journals that service the scientific community, it should be appreciated, however, that at this particular point in time the situation is definitely suboptimal. Due consideration should therefore be given by all scientists to the desirability of taking the necessary steps to achieve the target of a less opaque and pompous characteristic mode of written expression.

—DAEL WOLFE