

EDITORIAL

Word Processing versus Writing

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High technology has invaded the peaceful domain of scientific writing. Rather than laboring over a typewriter (much less pen and paper) to turn their thoughts into sometimes readable prose, writers sit comfortably before the video screen of a word processor. They tap out a few lines. Lights flash, and the lines appear at once before them. If they're not right, the offending words or lines disappear with the touch of a key. More lines are tapped out, guided by the mesmerizing, blinking cursor. When all seems satisfactory, the touch of another key may correct misspellings; another commits the composition on the screen to the certainty of a computer's storage, later to be retrieved and converted to typewritten text, presumably with equal certainty. Writing with a word processor is efficient, easy, and even fun. Two years ago it was unusual to receive a manuscript produced by word processor, but now over a third of the manuscripts submitted to this journal have been written using this technology. Word processing is rapidly becoming equivalent to writing. Or so it would seem.

With the ease and efficiency of word-processing writing, however, come some perils. Unless writers are aware of these and fight them, their prose may become boring or senseless, no matter how exciting their results or how pure their science. I see three major perils: duplication, verbosity, and laxity.

Of these, duplication is perhaps the most insidious. Word processors encourage one to store entire paragraphs or sections of manuscripts in the computer and then call them forth to be used, verbatim, in subsequent papers. It is much easier, for example, to recall a methods section from a previous paper and insert it as a block into a manuscript currently on the processor than to rewrite it entirely or make the revisions that would tailor it to the current presentation. In addition, the ease with which entire paragraphs or sections of manuscripts can be moved from one place to another may often destroy the transitions that give well-written prose a smooth flow. These practices promote not only dull but inaccurate prose.

A more pernicious temptation arises from the increasing pressure on scientists to maximize the number of publications generated from their research.

Superficially new manuscripts may be produced with ease by combining a few new paragraphs of introduction, results, or discussion with the basic structure of a paper already present in computer storage. Such duplication is, of course, unethical, but some authors seem to be insensitive to such constraints or too easily tempted.

The second peril, verbosity (what I call word-processor diarrhea), is related to the first. Our thoughts naturally tend to ramble, and good writing imposes logical and stylistic constraints on such excesses. Word processors promote an effortless flow of words from our mind to the screen, and the temptation to write now and edit later is strong. Voice-activated word processors, which will be available by the end of the decade, will only exacerbate this unrestrained translation of unedited thoughts into prose. The result is an increasing words:meaning ratio.

Laxity especially imperils the final preparation of a manuscript. Mistakes appearing on a screen may not be as apparent as those typewritten on paper, and the screen may produce greater visual fatigue. Inevitably some errors will be missed. Because the text appears so clean and crisp on the screen and when it is printed out, final editing and proofreading may be only superficial. With a conventional typewritten manuscript, human error is expected, and proofreading is more likely to be complete and conscientious. If the copy represents corrections of an earlier draft, there is a temptation to avoid proofreading the printed copy altogether, or to check over only the corrections, not the entire manuscript. Computers may not make errors, but they do have a nasty way of exercising commands that their human masters have forgotten or neglected. The consequence may be unanticipated slips between the screen and the paper.

There is no doubt that word processors represent an advance in writing that has great potential. Their speed and efficiency offer substantial time savings and thus provide the opportunity *really* to pay close attention to editing and composition and to express thoughts or present results in just the right way, because the tedium of typing and retyping (and retyping) is circumvented. But, in the end, word processors can only process what the writer provides. They produce clear copy, but they do not guarantee clear thinking or clear writing. Those will remain the responsibility of the careful writer.

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