

From: Maddox, John. 1995. Valediction from an old hand. *Nature* 378: 521-523.
This was Sir Maddox's "good bye" editorial as he stepped down as the Editor.

The English language is another casualty. It used to seem that *Nature's* contributors wrote clearly, but no longer. But has not science itself become much more intricate? That is true, but not so much as to justify the obscurity of most scientific texts. Nor is it that authors have become lazy; the accompanying figures are always excellently prepared, as are the typescript pages. The obscurity of the literature now is so marked that one can only believe it to be deliberate. Do people hide their meaning from insecurity, for fear of being found out or, in the belief that what they have to say is important, to hide the meaning from other people?

Comments on the passive voice from the journal *Nature* - three letters.

1. From Leon Avery, Department of Biochemistry., University of Texas, *Nature* 379:293 23Jan1996

SIR -In John Maddox's parting leading article (*Nature* 378, 521-533; 1995), he repeats a theme often sounded before: that scientists are poor writers (or at least that scientific papers are poorly written), and speculates on the reasons. One reason is that we are forced by our colleagues to write obscurely. This is never mentioned in the endless discussions about scientific writing, but it is true nonetheless.

For instance, Strunk and White advise writers, "Use the active voice". Robert Day adds, "Do not be afraid to name the agent of the action in a sentence, even when it is 'I' or 'we'". Following their advice provoked this response from a referee: "Most of my comments concern writing style. My biggest preoccupation with style is that the paper is written in the first person. This should be avoided whenever possible."

Here is some more advice given to authors: "Every scientist should avoid jargon" (Day). "Shortness is a merit in words" (Fowler). 'avoid fancy words" (Strunk and White). But scientists who have followed it know that their colleagues don't agree. The word "get" in their manuscripts is crossed out and replaced with "obtain" (occasionally with the comment "colloquial" in the margin). "Use" becomes utilize, "method" becomes (usually incorrectly) "methodology", and so on.

The worst sin is liveliness of style. Many scientists are earthy in speech but can't distinguish dignity from pomposity in prose. Lively writing will usually provoke criticism. If you attempt to include an actual JOKE in a scientific paper, you have a major fight on your hands.

Peer pressure can't completely explain why scientific writing has become so dark and dull. One has still to explain how we scientists picked up this dismal habit. But peer pressure can explain why the habit persists. A young scientist who tries to write well gets stamped on. To avoid the risk of inflaming a referee and having a paper rejected, he

desists. In time, the belief that "get" is a colloquialism so grows on him that he automatically crosses it out whenever he sees it.

2. From Simon R. Leather, Department of Biology, Imperial College, Silwood Park, Ascot, Nature 381:467 6June1996

SIR - Maddox's article accusing scientists of being poor writers engendered a reply from one of the growing number of adherents to the use of the active voice in scientific writing. This practice appears to have arisen in the United States over the past 20 years or so and is now encouraged by authors of otherwise excellent texts on scientific writing, Day for example. It is claimed that the use of the active voice encourages clearer and more exciting writing and that the use of the passive voice is more difficult for the reader and is an expression of false modesty. The truth is that both the teaching of the English language and the standards expected of students have declined from the previous high standards upheld by educators in the English-speaking world. Simply put, the writing of precise prose in the passive voice has become too difficult for many of today's scientists. This is unfortunate for a number of reasons.

Using the passive voice in scientific writing allows the researcher to stand at a distance from his or her work. By standing at a distance, an unbiased viewpoint is much more likely to be reached. An unbiased viewpoint encourages a world view and an open mind, surely prerequisites for good science. Many scientific papers published today refer only to literature published in the past 5 years (in other words, easily located using one of the computer databases available), are parochial in nature and in many cases put forward old arguments as new. John Lawton terms this habit 'reinventing the wheel' and implies a 30-year cycle.

The use of the passive voice encourages disciplined writing, cases must agree, tenses must be used correctly. It is therefore more demanding, but the precision and professionalism displayed is worth the effort. It is possible to be enthusiastic and to write stimulating and exciting prose using the passive voice. How many of the most memorable prose passages in English literature are written in the active voice?

Using the active voice is an easy option. There is no need to discipline one's thoughts. An author can just pour out his or her thoughts. This leads to careless presentation, particularly in methods and materials sections. As any editor knows, many papers submitted for publication appear to be first, or at the best second, drafts. Most authors using the active voice show no consistency of use. Papers alternate between passive-voice statements and active-voice statements, sometimes in the same paragraph, with no logic for the change of voice. This results in a paper full of inconsistencies and, of course, a general mixture of styles.

Using the active voice engenders possessiveness in the results and/or work. By engendering possessiveness an author risks adopting a biased and partisan stance. Wearing blinkers is no way to conduct good science. The active voice, with its less professional approach and tendency to foster the use of colloquialisms ("hassle" is one example I came across in a submitted manuscript) can make the writing appear quaint and amateur and akin to the offerings seen in amateur journals of natural history.

It is tempting when writing from a partisan viewpoint to descend to spite and denigration of other work. This too often manifests itself in biased and anonymous peer review of manuscripts and grants;. There is also the possibility that use of the active voice and the resulting adoption of results and hypotheses as the author's own personal property lead to an unwillingness to see those results contradicted or refuted. This may, in the worst-case scenario, lead to the fabrication of results, something seen much more today than 20 years ago when the passive voice was de rigueur, as judged by the number of articles concerning the subject seen recently.

In conclusion, the use of the passive voice encourages precision and probity. and when used correctly can generate as much passion and stimulation as the skilled use of the active voice. The active voice encourages carelessness, partisanship, and as used by many of its adherents, does no favours to the English language or science.

3. From Alan M. Perlman Kraft Foods, Inc., Northfield, Illinois 60093, USA, Nature 382:108 11July1996

SIR -I am an academically trained linguist (PhD, University of Chicago). I have spent 14 years teaching English composition and linguistics in various universities, where I have taught graduate: seminars on the structure and process of written language, and 15 more as a professional writer. I am not a regular reader of your publication; my brother, who is, showed me Simon Leather's Letter, which purports to make to make "the case for the passive voice" (Nature 381, 467; 1996).

About all that I can say with certainty regarding the passive voice is that it omits the performer of the action, for reasons that may be: contextual (the reader already knows who or what performed the action, so mentioning the agent is redundant); rhetorical (either the agent is unknown or irrelevant, or the writer wishes to conceal his/her/its identity); structural (the writer wishes to keep sentence-topic consistent from one: sentence to the next); or cultural (as in scientific writing, where use of the passive, rigidly enforced by senior members of the community, serves as a sign of in-group membership).

Leather goes far beyond these simple truths, with absolutely no scientific data. Where are the quantitative stylistic analyses, where is the behavioral or psycholinguistic research to support his statements that "the use of the passive voice encourages disciplined writing" (indeed, tenses must be used correctly" in all writing); that using the active voice: encourages possessiveness in the results and/or work;" that the active voice [has a] tendency to foster colloquialisms;" that the use of the active voice...leads to an unwillingness to see [the author's] results contradicted" and to "the fabrication of results"? I know of no such research. I strongly doubt that it exists.

I consider Leather's letter an outrageous display of scientific hypocrisy. He makes dogmatic pronouncements on a subject he knows nothing about - It's as if I, armed only with my tenth-grade biology course, were to undertake to prove the superiority of mammals over reptiles, on the grounds that the former are cuddly and smart, whereas the latter are slimy and stupid.

Leather should practice what he preaches: of the 18 transitive sentences in his letter, only four were in the passive.