On the current presentation of scientific papers: 5. Verbs and tenses

Denys Wheatley

Editor in Chief, Cell Biology International; Cell Biology International Reports; Cancer Cell International; Oncology News; Chairman and Director, BioMedES; Leggat, Keithhall, Inverurie, Aberdeen AB51 0LX, UK; 3232dnwd@gmail.com

"Proper words in proper places makes the true definition of style."

Jonathan Swift

Choosing the right words and putting them in the correct order can be difficult, even for native English speakers. For this reason non-native English speakers often have to use editorial services to improve the presentation of their papers. A paper submitted by someone with a masterly touch (style) in English has a far greater chance of being accepted at peer review.

The verb is particularly important, never more so than in scientific writing, because of the prime requisite - to be precise. Unfortunately for non-native speakers, English is full of words that connote (slightly) different meanings, whereas other languages have far fewer alternatives. If there is one verb that is grossly overused today it is "to evaluate"; it is not so much incorrect as inappropriate to use without considering more apposite verbs. Far better words can be found, one excellent alternative that has lost favour being "to measure". Others include: to assess, examine, explore, investigate, and determine. Some verbs commonly used in papers have connotations in English that are simply irksome, euphemisms such as "to sacrifice" instead of to kill or slaughter (since no altar is used!). Cells are harvested from cultures; to exhibit/demonstrate/display means to show; to observe invariably displaces to see, to find, and to notice; to perform has replaced to do (no stage in sight!); to decrease has become "to cause a decrease in", much as "to lead to an elevation in" means "to raise". These are just a few examples of the use of inappropriate verbs in the majority of today's articles.

Word order and the verb

The verb is usually the most important word in a sentence because it intimates action. The subject and the object provide the context between which the right verb has to be chosen. Unlike some other languages (eg German), English sentences are best constructed with the verb up front. A heap of subordinate clauses before the verb is frustrating, particularly when used in sentence after sentence — Sir Ernest Gowers in Plain Words¹ writes "the reader is kept waiting an unconscionable time for the verb". Scientific writing unfortunately tends to have too many qualifications (ie conditional subclauses) before reaching the verb, weakening the impact of the message being communicated. Take an extreme case where a verb all alone conveys its message immediately - "Jump"!

Tense

Tense is a problem for most writers, not just non-native English speakers. Tense is an odd word that etymologically comes not from "ten" as its stem, but "temp", indicating time (past, present, or future). The complex tenses found in the English language are particularly confusing for foreign speakers. Consider "he had a bald head" (past) and compare it with "he had had a bald head" (past perfect)! Most scientific articles are written in the past tense, reporting what was or has been done. An occasional paper tries to use the present tense throughout, but sounds like a recipe (we do this, and next we do...).2 Difficulty arises because the present tense is needed in some instances in a paper, and authors, reviewers and editors should constantly be aware of this problem. As a quick example consider "we investigated whether X was proportional to Y", which should be "we investigated whether X is proportional to Y". Either X is proportional to Y or it is not. Figure legends often take a different tense from the text. "Z was located in the nucleus" is fine in the text, but in a legend pointing to the site of Z, it can be seen that it "is in the nucleus". Likewise the Discussion uses both the past and present tenses, often changing within a sentence. While "we found our results confirmed the hypothesis of Jones and Li (2010)" is acceptable; "...our results "confirm the hypothesis" is better because the hypothesis is extant. [One particularly annoying phrase widely used today is "to further confirm"; no matter how many ways you confirm something, each is a confirmation, not a further confirmation.]

Active or passive

The active verb is now being used with the personal pronoun. "We evaluated" is perhaps the most commonly used opening in scientific papers; this leads to we being annoyingly reiterated — we examined this... and then we recorded that... Reiterative use occurs when authors cannot easily manage the passive tense, which can relieve the monotony of the personal pronoun; we carried out a survey becomes a survey was carried out.

Some smaller issues

Finally, I will mention a few other problems with verbs. Split infinitives are no longer a no-no, and have become common place. Sometimes they sound wrong, in which case change the word order, eg "to leave the room quietly" is better than "to quietly leave the room." Repeating verbs can also be irksome: "the suspension was centrifuged and the pellet was retained" flows better as "the suspension was centrifuged and the pellet retained." Verbs ending in "ise" have mostly become "ize". Recognise and recognize are equally acceptable, but some "ise" have resisted becoming "ize" (surprise, arise, devise).

References

- 1 Gowers, E. *Plain Words: a guide to the use of English.* His Majesty's Stationery Office, London 1948.
- 2 Ferraro-Gideon J, Hoang C, Forer A. Mesostoma ehrenbergii spermatocytes – A unique and advantageous cell for studying meiosis. *Cell Biology International* 2013;37(9):892-898. doi: 10.1002/cbin.10130