

On the current presentation of scientific papers: 2. Cutting out clichés

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There are a huge number of clichés that abound in scientific literature, mostly phrases that have little or no meaning in their context, are often inappropriate, and can usually be left out or replaced by a single word.

A cliché is a hackneyed phrase that annoys and riles readers, and especially editors, when repeated throughout an article. The most common cliché in English is “at the end of the day”. Which day? Today? Tomorrow? Does the phrase have any meaning? Put it to the test: in any sentence, written or spoken, leave out this cliché and see what difference it makes.

Clichés are difficult to define. They are usually overused to express emotions, and are apt to come quickly into and out of favour. Clichés find their way into the scholarly literature, when the authors do not question their relevance (ie thoughtlessly reiterated phrases that have become firmly entrenched). One that particularly riles me is “Taken together, these results show that...X is proportional to Y”, when “Thus, X is proportional to Y” would be adequate. Here are some prime examples for consideration.

1. It is important to mention that... (It is worth mentioning that... It is noteworthy that... etc.)
2. It is (a) well-known (fact) that...
3. To further confirm...
4. This study highlights the fact that...
5. The purpose of this article is to try to evaluate...
6. To the best of our knowledge...
7. Many recent studies have demonstrated that...
8. Our findings show, for the first time to our knowledge, that...
9. Reports in the literature suggest that...
10. ...according to the manufacturer's instructions.
11. ...should be better understood after further experimentation...
12. The treatment was evaluated over a period of time lasting 3 days...
13. In addition, we also tested whether...
14. Our data lead us to consider that...
15. As shown in Figure 2...
16. We next studied the effect of...

You may have noticed that the verb “to evaluate” in many clichés now replaces a whole range of more precise words that should be used in the proper context (eg to examine, determine, measure, assess, investigate, judge, explore, inquire into).

I will deal with several of the clichés listed above to indicate my feelings about their use (not usage!) in scientific papers. The first example is telling the reader that they must not forget to mention something, but why not just tell what it is? The second is obvious – if it a well known fact, what is the point of telling us? The sixth example seems to indicate that the authors have not done a full literature search. As experts in their subject, they should know the literature; if they have missed important references, their peer reviewers will soon let them know. The eighth example is the business of making (asserting) prior claim, for which there is a strong desire in scientific practice for personal recognition for some marvellous new discoveries. A research article is the well established vehicle for communicating original findings, and therefore has to be novel, making the cliché “for the first time” redundant. The tenth example comes close to being the most frequently I encounter in my role as an editor. Commercially available kits are used today in most biomedical assays. It would be unbelievable that the experimenters had not followed the manufacturer's instructions, just as they would have to do so when using an ultracentrifuge. However, if they had modified the instruction, the reader would then need more information.

In the fifteenth example, attention is drawn to a figure before stating the data/finding. There is no need for this; the data should be given first, and the end of the sentence authors should insert “(Figure 2)”. The last example betrays the fact that the writers of an article claim to have followed a very logical sequence of experiments, done neatly one after the other, each section of the results starting with a similar cliché, eg “Next, we analysed ...(the rate of)...” But few of us are clever enough to be so precisely logical in the execution of our experiments, at least when actually testing a hypothesis, since we usually examine it from many different directions.

Perhaps other editors might post some of the clichés that frequently arise in papers and annoy them. If we manage to eliminate some these annoying clichés from scientific papers, a little progress will be made.