

Meet the Editors, Day 2

Four-Letter Words and Finishing Touches

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Tricky (but Polite) Four-Letter Words

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|--------------------|--|
| 1. only, also | two commonly misplaced modifiers
and placement of adverbs generally |
| 2. that | how not to confuse with “which” |
| 3. need | why you may not need it |
| 4. the fact that | how to trim off some flab |
| 5. the case | more flab |
| 6. lead (the verb) | and its past tense led |

“Only” should be placed just before what it modifies.

Which is correct?

- (a) These forms are **only obtained** at the expense of additional symmetries and particles.
- (b) These forms are obtained **only at the expense** of additional symmetries and particles.
- (c) We can **only define** the Fano line shape if we know the dimension of the host.
- (d) We can define the Fano line shape **only if we know** the dimension of the host.

“Also” at the beginning of a sentence is likely to be far from what it modifies and makes the whole sentence sound like an afterthought.

Misplaced: **Also** it is desirable to apply the highest feasible voltage.

Better: It is **also desirable** to apply the highest feasible voltage.

Where would you place “also” in this sentence?

Neutrino oscillations provide independent confirmation of the standard solar model.

How about in these?

The concept of the classical limit will be discussed.

We can adjust the parameters.

The rule for placement of “only” and “also” can be extended to apply to most adverbs--put them just before what they modify.

Where would you place “completely” in the following sentence?

The insulated feed-through prevented arcing even during high-current operations.

With compound verbs, place your adverb after the auxiliary and before the main verb.

Examples:

will rapidly converge
have long been known
can easily be adjusted
could severely limit
might incorrectly assume

“Differently” is an exception. It goes after the verb:

Examples:

behave differently
are handled differently
will evolve differently

Never place an adverb between a verb and its object.

In this sentence the verb is “affect” and the object is “properties.”

Impurities **affect** the elastic **properties**.

Where would you place “significantly”?

Where would you place “also”?

Where would you place “differently”?

“That” and “which” and how not to confuse them: Use “that” to define or restrict and “which” to expand.

Example of “that”:

An approach **that is based** on perturbation theory offers several advantages.

Only an approach based on perturbation theory is under consideration. “**That is based ...**” defines or restricts the approach we are talking about.

Example of “which”:

This approach, **which is based on perturbation theory**, has generated a good deal of controversy.

The “which” clause, “**which is based on perturbation theory**,” gives additional information. It expands on the main statement. If you took it out, the sentence would still make sense.

Note that the “which” clause is set off by a comma at each end.

Would you use “that” or “which” in the following sentence?

Chen *et al.* have developed a Bose-Einstein crossover theory of short-coherence-length superconductors _____ exhibit a pseudogap.

Often you have a third option--neither of the above.

An approach based on perturbation theory ...

This approach, based on perturbation theory, ...

In the second version above, even though “which is” has been removed, the commas setting off the clause from the rest of the sentence have been retained, to indicate that this clause is just additional information, not integral to the sentence.

“Need.” Why you may not need it.

Need is a human trait. When talking about something inanimate, use “require,” “must,” or “should.” How would you edit the following sentences without using “need”?

- (a) The dial needs to be set at 0 prior to turning on the high-voltage power supply.
- (b) Continuous observations are necessary to be carried out in order to derive accurate orbital masses, luminosities, and distances.

The fact that ...

“The fact that” is a flabby phrase that can always be trimmed from your writing. Can you suggest shorter replacements for the following?

- (a) The fact that da Silva succeeded
- (b) Owing to the fact that
- (c) Despite the fact that
- (d) He was unaware of the fact that the wavelength ...

“The Case”

“The case” is not wrong, but very often it can be replaced by a shorter and leaner expression:

For the case of	for
In many cases	often
It has rarely been the case that we	we rarely
In the case when	when

“To lead” and its past tense “led”

“Lead” is a present-tense verb and an element (Pb). The element is spelled the same as the verb, but pronounced “led,” which has led to some confusion. The past tense of “to lead” is “led.” It is both spelled and pronounced “led.”

Right:	This discovery led to new applications.
Wrong:	This discovery lead to new applications

Participles or -ing words -- don't leave them dangling.

After a phrase like “breaking into my own house,” the next word must be the agent who is doing the breaking.

Breaking into my own house, I straddle the sill ...

When the agent is not the next word, the sentence is incorrect.

- (a) Leaping to the obvious conclusion, the equation ...
- (b) Inserting the higher number, the answer can be found.
- (c) Comparing the energy density and the lifetime, only a chemical storage mode makes sense.

When you use “-ing” words as nouns (gerunds), a special pattern applies.

Right: There is no danger of the **rule's** being broken.

Wrong: There is no danger of the **rule** being broken.

Right: This led to **his** locating all unstable periodic orbits.

Wrong: This led to **him** locating all unstable periodic orbits.

Right: We designate this by N' to prevent **its** being confused with N .

Wrong: We designate this by N' to prevent **it** being confused with N .

The Subjunctive Mood

The subjunctive mood provides a neat way of stating a condition or requirement. No need for “must” or “should.” They are understood from this construction.

Examples:

This model requires that the system **remain** near equilibrium.

We impose the constraint that the eigenmodes **satisfy** the boson commutation relation.

Figure captions -- finishing touches

1. Remember to include a title. Provide a brief description of the whole before describing the parts.
2. First things first: identify curve, section, or data point before talking about it.

What do you call this? Conventional names for parts of a figure.

Use this name

Rather than

Fine line

Thin line

Heavy line

Thick line

Dashed line

Broken line

Solid line

Full line

X's

Crosses (unless you
are using crosses)

Data point symbol

Word describing symbol

Place credits and reference citations, if any, at the end of your figure caption

This will help the Editor when selecting a cover figure for the journal. Figures that have already been published elsewhere can then be identified quickly (and are usually ruled out).

Acknowledgments

1. Seek a middle ground between too formal (Sir Dr. A. J. Leggett, Nobel Laureate) and too informal (Danny Loss, Bill Phillips, Chu Oliveira). Do not use titles, including Professor.
2. First person (I or we) is OK. When one co-author has a particular thanks to give, use initials for that co-author: “RG wishes to thank ...”
3. Do not thank Mom or girlfriend or typist in Acknowledgments (though they may deserve thanks).
4. Remember to acknowledge research support.