Scientific Writing: Some Common Myths and Errors

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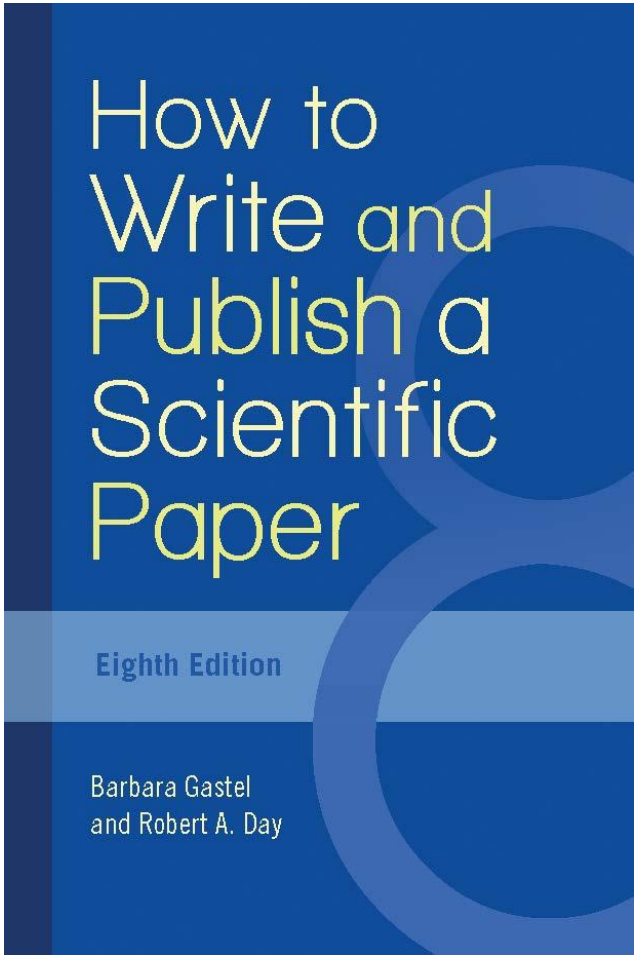
Overview

- Introductions
- Scientific writing: 10 common myths
- Scientific writing: 10 common errors
- Some resources for busting myths and avoiding errors
- Responses to your questions
  (During this webinar, please submit questions about possible myths and errors.)

A Little About My Background



Some Aspects of My Background

- MD/MPH focusing on science communication
- Teacher of science writing, science editing, etc
- Coordinator of science journalism MS program
- First author, newest edition of *How to Write and Publish a Scientific Paper*
- Past recipient of fellowship to evaluate EIS course
- It's good to be back!

How About You?

- What is your main professional role?
  - Epidemiologist or such?
  - Laboratory researcher?
  - Administrator?
  - Writer or editor?
  - Trainee?
  - Other?
- Do you have possible myths and errors to ask about?

Scientific Writing: 10 Myths

1. Good writers get it right the first time.

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- The myth seems reasonable because . . .
- However, writing generally needs substantial revision to achieve its potential. Typically, good writers
  - Revise their work several times themselves
  - Revise their work further in response to feedback from others
- Good writers just make it *look* easy.

2. Using first person in a journal article is unacceptable.

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- The myth seems reasonable because . . .
- However, use of first person (*we* or *I*) often is
  - Clearest
  - Most concise
- Therefore first person generally is acceptable in scientific writing.
- Careful crafting can avoid repeating *we* or *I* excessively.

3. Passive voice is preferable to active voice.

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- The myth seems reasonable because . . .
- However, active voice (for example, “nurses interviewed the patients”) tends to be more informative, more concise, or both than passive voice (“the patients were interviewed” or “the patients were interviewed by nurses”).
- Passive voice need not be avoided entirely. For instance, using it may be suitable when the subject of the action need not be specified (for example, “the gels were stained with . . . ”).

4. Long words and sentences are preferable to short ones.

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- This myth seems reasonable because . . .
- However, needless use of long words and sentences tends to make writing harder to understand (perhaps especially for non-native readers of English).
- Effective revision often includes simplifying language and condensing or dividing sentences.

5. Non-native speakers can’t excel in English-language scientific writing and editing.

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- This myth seems reasonable because . . .
- However, many non-native speakers write and edit English very well.
- English writing and editing do tend to be more difficult, especially at first, for non-native speakers.
- Remember: Writing idiomatically is not a major aspect of writing well in science.
- In some regards, being a non-native speaker can be an asset.

6. Splitting an infinitive is unacceptable.

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- This myth seems reasonable because . . .
- Actually, experts now tend to consider it acceptable to split an infinitive (for example, to write “to quickly read the article” rather than “to read the article quickly”) .
- However, avoiding split infinitives might generally be advisable, as some readers think that split infinitives are incorrect and so may be distracted from the content.

7. Ending a sentence with a preposition is unacceptable.

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- This myth seems reasonable because . . .
- Actually, experts now tend to consider it acceptable to end a sentence with a preposition.
- However, perhaps generally avoid doing so in formal writing, as some readers might think that doing so is incorrect and so may be distracted from the content.

8. The role of editors and peer reviewers is to reject papers.

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- This myth seems reasonable because . . .
- However, editors want to publish papers.
- The role of editors and peer reviewers is to
  - Select papers
  - Improve papers

9. A scientific poster should contain as much information as possible.

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- This myth seems reasonable because . . .
- However, cramming a poster with information is counterproductive.
- Basically, a poster should be an extended, illustrated abstract.
- (For more information, please see the webinars that we have given about posters.)

10. If you recall that your high school teacher said it, it must be right.

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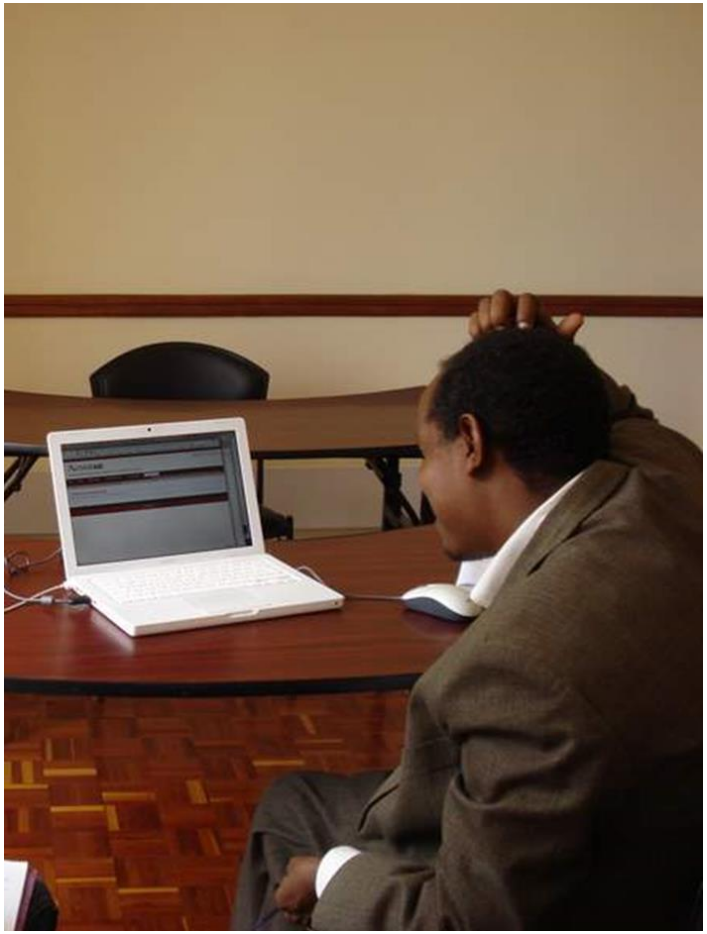
- This myth seems reasonable because . . .
- However,
  - Your teacher might not have been correct.
  - You might not correctly remember what your teacher said.
  - Norms change.

Any Questions or Comments?



Scientific Writing: 10 Common Errors

1. Lack of compliance with instructions

Enough said!

2. Excessive capitalization

Note: Don’t capitalize disease names. For example, write *rheumatoid arthritis,* not *Rheumatoid Arthritis.*

3. Lack of subject-verb agreement.

Example: The epidemiology and management of this condition ~~is~~ are complex.

4. Omission of the comma at the end of an appositive.

Example: Dr. Denise Koo, a former student of mine, retired from CDC in 2016.

5. Misuse of semicolons

Semicolons

- An incorrect use (of a type sometimes suggested by online checkers):
  - Although an excellent vaccine exists; many people refuse to receive it.
- Correct types of use:
  - My classmate took electives mainly in biostatistics; I took electives mainly in international health.
  - The available color combinations are red, white, and blue; black, white, and purple; and beige, rust, and olive.

6. Lack of parallelism

Example: “outlining, drafting, and to edit” instead of “outlining, drafting, and editing”

7. Interchanging similar-sounding words

Examples:

- Affect/effect
- Continuous/continual

8. Other usage errors

Examples:

- Confusion of *case* and *patient*
- Use of *females* where *women* would be more appropriate

9. Uninformative placement of citations

For example, placement of all citations at the end of the paragraph

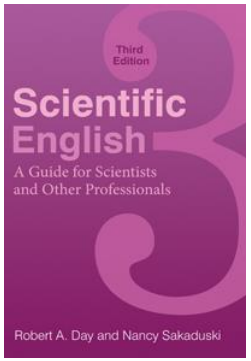
10. Insufficient proofreading

Some suggestions:

- Read aloud.
- Have others also proofread your work.

Some Resources for Busting Myths and Avoiding Errors

- *AMA Manual of Style*
- *Scientific English*
- Grammar Girl
- Purdue OWL (Online Writing Lab)
- Texas A&M University Writing Center
- AuthorAID



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Note: If in doubt, look it up!

Your Questions about Possible Myths and Errors

Thank You!

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