

Writing Tips, Traps, and Tricks

Randy Black

Randall.Black@ucr.edu

Writing Tips

“It is an old observation that the best writers sometimes disregard the rules of rhetoric. When they do so, however, the reader will usually find in the sentence some compensating merit, attained at the cost of the violation.”

-- William Strunk, Jr., *The Elements of Style* (1918)

Tightening Text

Wordy text demands more time and energy than your reader may be prepared to invest.

Economy of expression rewards your reader and keeps him or her reading.

Brevity demands *your* time and energy.

"I have written you a long letter because I did not have time to write a short one."

- Blaise Pascal

Let's Do the Tighten Up

Avoid the verb “to be” in all its forms: is, was, are, am, will be, have been, etc.

“A **Southern blot** **is** a method routinely used in molecular biology to check for the presence of a DNA sequence in a DNA sample. Southern blotting combines agarose gel electrophoresis for size separation of DNA with methods to transfer the size-separated DNA to a filter membrane for probe hybridization. The method **is** named after its inventor, the British biologist Edwin Southern. Other blotting methods (i.e., western blot, northern blot, southwestern blot) that employ similar principles, but using RNA or protein, have later been named in reference to Southern's name. As the technique **was** eponymously named, Southern blot should be capitalized, whereas northern and western blots should not.” Wikipedia

Instead, use clauses to replace “is.”

“A method routinely used in molecular biology to check for the presence of a DNA sequence in a DNA sample. Southern blotting combines agarose gel electrophoresis for size separation of DNA with methods to transfer the size-separated DNA to a filter membrane for probe hybridization. Named after its inventor, the British biologist Edwin Southern, the method [preceded] other blotting methods (i.e., western blot, northern blot, southwestern blot) that employ similar principles, but using RNA or protein, have later been named in reference to Southern's name. Eponymously named, Southern blot should be capitalized, whereas northern and western blots should not.”

Remove unnecessary words

Target words in yellow:

- A method routinely used in molecular biology to check for the presence of a DNA sequence in a DNA sample, Southern blotting combines agarose gel electrophoresis for size separation of DNA with methods to transfer the size-separated DNA to a filter membrane for probe hybridization. Named after its inventor, the British biologist Edwin Southern, the method [preceded] other blotting methods (i.e., western blot, northern blot, southwestern blot) that employ similar principles, but using RNA or protein, have later been named in reference to Southern's name. Eponymously named, Southern blot should be capitalized, whereas northern and western blots should not.

How does this look?

Used to check for a DNA sequence, Southern blotting combines agarose gel electrophoresis for size separation of DNA with transfer [of] the size-separated DNA to a filter membrane for probe hybridization. Named [for] its inventor, the British biologist Edwin Southern, the method [preceded] western blot, northern blot, southwestern blot that employ similar principles, but using RNA or protein. [Unlike] northern and western blots, eponymously named Southern blot should be capitalized.

Further refinements: Targets?

Used to check for a DNA sequence, Southern blotting combines agarose gel electrophoresis for size separation of DNA with transfer [of] the size-separated DNA to a filter membrane for probe hybridization. Named [for] its inventor, the British biologist Edwin Southern, the method [preceded] western blot, northern blot, southwestern blot that employ similar principles, but using RNA or protein. [Unlike] northern and western blots, eponymously named Southern blot should be capitalized.

107 words now 69:

To detect a DNA sequence, Southern blotting first separates and sorts DNA by size using agarose gel electrophoresis, prior to exposure to a labeled hybridization probe, which binds to the sequence of interest. Named for its inventor, British biologist Edwin Southern, the DNA probe preceded western blot, northern blot, and southwestern blot, which employ similar principles but use RNA or protein and, unlike the Southern eponym, are not capitalized.

Target words for tightening:

- “Existing” – Most things exist. With the possible exception of loans or agreements, have a good reason to mention this unremarkable quality.
- “I think that,” “We believe,” “It is our opinion that” – These words often are unneeded, I think.
- “Obviously,” “clearly” – If accurate, these words (and perhaps entire sentences they introduce) may go without saying.

- “Robust” – Substitute “swell,” “grand,” “strong,” or “remarkable.” Then delete.
- “Not only ... but also” – Often a simple “and” will do.
- “Furthermore,” “Also” – As sentence openers, these are tacitly assumed.
- “Represents,” “constitutes” – often used as fancy substitutes for “is.” See above.

- “Utilize” – “use” is shorter.
- “Indeed” – same category as “forsooth,” “verily,” “really,” “honestly,” and “truly.”
Unless you have been lying and want to indicate a contrast, these are conversational fill words.
- “Totally” and “completely” – Like totally extraneous filler.

The “from . . . to . . .” trap

- Sentences using this structure often end up causing trouble. “The typical country store has everything from overalls to baby chicks, from soda pop to fly paper, from pickled pigs feet to canning jars.”
- Where are we going with this? The list is incomplete, so why did it stop? Then again, we can’t list everything in the store. We are trapped in arbitrariness.

IF there are defined boundaries – e.g., of scale (“from quarks to galactic clusters”), time (“from dawn to midnight”), sequence (“A to Z”), or development (“from cradle to grave”) – the writer can achieve meaningful closure.

Otherwise, heading down the “from . . . to . . .” path leads to trouble in nearly every kind of writing, from reports to essays, to articles, to grant applications, to ransom notes, to you name it.

A more general principle: Don't open a "can of worms"

- Since you can't explain the entire history of your topic, how much background should you include?
- Three questions: How much do your readers *want* to know? How much *should* they want to know? How much do they *need* to understand you?
- Only the answer to question #3 should concern you.

How smart is my reader?

Who are you writing for? As you write, keep before you a mental picture of the reader: the reason you write.

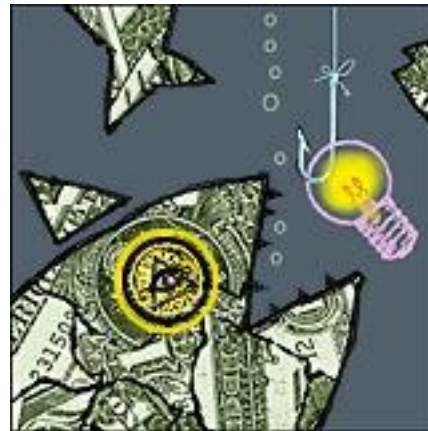
Your reader may be ignorant of your topic and possibly your field of specialization, but should be presumed intelligent and generally educated.

Unfortunately, specialists often begin with a patronizingly elementary lead sentence or two, “Tensors are important in physics and engineering.”

Then drag the unsuspecting reader into an impenetrable thicket: “In the field of diffusion tensor imaging, for instance, a tensor quantity that expresses the differential permeability of organs to water in varying directions is used to produce scans of the brain; in this technique tensors are in effect made visible.” (Wikipedia, “Tensor”)

Idea Teleportation

Rely on your reader's mental models as storehouses of thousands of words at your disposal. Examples and analogies unlock those storehouses.



Example Example

A concrete example helps explain the difference between weight and mass:

“The hinges holding up the heavy door of a bank safe make it ‘weightless,’ but the inertia of its mass requires force to move the door.”

Use analogies and comparisons to tap your reader's (existing) mental models to abbreviate explanation.

- “Flying a helicopter is like driving a car with a manual transmission, except with three clutches instead of just one.”
- “Teaching people how to write is like teaching people to swim: without a tangible context, instruction is abstraction.”

More analogies

- “Your car’s suspension is a lot like a pogo stick, without the stick.”
- “DNA can be compared to a chemical zipper, with each open half-zipper acting like a mold to cast its opposing half-zipper in RNA. RNA strands then float off to become molds for the original DNA half-zipper, or zipper pieces.”

≠

Analogies by definition are imperfect copies; a source of both strength and weakness. A poor or stretched analogy can confuse.

“Chess is just like checkers, except that the pieces, with the possible exception of pawns when capturing, move completely differently.”

Did that help?

Make sure your audience gets the reference:

- “A burrito is exactly like a crepe Suzette except without the Grande Marnier, and using a flour tortilla plus refried beans.”
- “A maglev train is propelled just like an electric motor, except the stator is laid out flat and the rotor (the train) moves forward instead of rotating.”

If you can identify an analog of your idea in the reader's mind, he or she becomes your ally in comprehension of the unfamiliar. "Prison inmates use cigarettes like money."



(Nuts and Bolts)

Quotation marks

- Commas and periods go inside quotation marks.
- Colons, semicolons, question marks and exclamation points go outside, unless part of the original quote:
- Instead of “true blue,” do consumers now want “genuine green”?
- The particles get their name from Joyce’s “Three quarks for Muster Mark!”
- Proceed normally unless the label is marked “radioactive,” “flammable,” or “biohazard.”

That vs. Which

Use “that” for restrictive clauses:

- “This is the car that I bought yesterday.”

“That” introduces crucial identifying information that restricts which car we are talking about.

Use “which” for nonrestrictive clauses:

- “This car, which I bought yesterday, is very economical.”

“Which” flags non-restrictive, parenthetical information; usually set off by commas.

Examples from: Prentice-Hall Handbook for Writers, 7th Ed. (1978)

Make sure clauses modify
(and typically, follow closely)
the appropriate word:

- “The study will use samples prepared by undergraduate students, each weighing 50 grams.”
- “The sheriff stood wiping his neck on the courthouse steps.”

An actual story:

Man overboard refused help before shooting

Associated Press 7/22/2008

“Police said Hirschfield apparently jumped off the boat voluntarily but did not know why.”

“This” or “these” in a later sentence require the reader to remember and/or sort out the referent.

“Earthlike planets have been discovered orbiting nearby stars. **These** now number in the hundreds.”

Better: Use “this/these” to point back as amplifiers for new information:

“Earthlike planets have been discovered orbiting nearby stars. These rocky worlds, most too hot or too cold for liquid water, now number in the hundreds.”

“As” vs. “Since”

- “As I was going to the store, I decided to get you some flowers.”
- “Since I went to the store, I got you some flowers.”
- “Because I was going to the store, I decided to get you some flowers.”
- “As I was going to St. Ives, I met a man with seven wives.”

Quantify, quantify, quantify

Words such as “Many” “Very” “Etc.” reveal gaps in knowledge. Plug the gap or rephrase.

“‘Many’ is a word that only leaves you guessing; guessing ‘bout a thing you really ought to know.”

-- Led Zeppelin

“Substitute ‘damn’ every time you’re inclined to write ‘very’; your editor will delete it and the writing will be just as it should be.”

-- Mark Twain

Rules are boring.

Master them and then flout convention. It takes writing confidence to ruthlessly split an infinitive, or sneak in a preposition to end a sentence with.

Learn the blues; then rock and roll. Integrate the standard licks into your writing repertoire and then extemporize.

“The Blues had a baby and they named it Rock and Roll.”

-- Muddy Waters

Writer's Block

We don't speak of "doing the dishes block." Start. The Muses can't descend until you do. Writing doesn't have to start out good, but it does have to start out.

If you really can't write, there is usually another problem. It could be the project concept ("The Fascinating History of Lint") or just a bad start. You didn't start a sentence with the structure "from _____ to _____," did you? Bogged down in the introduction? Write the main argument or conclusion and come back.

Writer's Block

It may be an audience issue. Are you writing for a particular person you dislike? Write it for someone else.

Identify the problem, and start.

“Do or do not. There is no try.”

- Yoda

Golden Word Syndrome

After all that work, my writing must be a masterpiece. You wouldn't touch up the Mona Lisa or take a rock hammer to the Pieta (although a disturbed geologist did in 1972).

Think again. Good writing is good editing.

Embrace criticism

Even the best editing stings and burns like Bactine on a sidewalk-scraped knee.

If you can find a good editor, listen and learn, and count your lucky stars.

If you can't find a good editor, find a friend with a mean streak.

To invigorate your writing

- Put a picture related to your topic in front of you as you write. This helps for technical subjects.
- If you are writing for a fee or for a grant, put some money in front of you.
- Take out words.
- Take out some more words.

To invigorate your writing

Value clarity and economy of expression in writing as you do precision in thought.

Remember that you inherit a complex, powerful and beautiful language, a flame that gutters in the wind and burns only as brightly as the latest generation of writers and readers.

Be a keeper of the flame.

Find the Words

The ability to write is not a gift. Although some writers are gifted, writing is a craft and an art that demands practice and persistence.

Some never find the words. I hope you find the words. A professor once wrote on my paper, “Your writing improves with every page.” Yours does, too.

Thanks for Listening



“When something can be read without effort,
great effort has gone into its writing.”

- Enrique Jardiel Poncela

Careers That Don't Require Writing



Careers That Require Writing

- Scientist
- Author
- Public Relations
- Advertising
- Journal writer/editor
- Technical Editor
- Grant Writer

Resources

- The Elements of Style, Strunk & White
- The Language of Success, Tom Sant
- Guide to Effective Grant Writing, Otto Yang

More Resources

- SCIENCE COMMUNICATION/SCIENTIFIC WRITING
- Montgomery, *The Chicago Guide to Communicating Science* (Chicago)
- Day & Gastel, *How to Write and Publish a Scientific Paper* (Greenwood)
- ***Blum/Knudson, *A Field Guide to Science Writing* (Norton)
- ***Hancock, *Ideas into Words: Mastering the Craft of Science Writing*
- (Johns Hopkins)

***** = Primarily intended for professional writers and editors**

Even More Resources

FUN AND USEFUL

- Bryson, *Bryson's Dictionary of Troublesome Words* (Broadway Books)
- Blount, *Alphabet Juice* (Farrar, Straus and Giroux)
- National Association of Science Writers