Six Sick Science Sentences

Most of the fundamental ideas of science are essentially simple, and may, as a rule, be expressed in a language comprehensible to everyone.
—Albert Einstein, The Evolution of Physics

The title of this issue’s column reminded me of a tongue-twister that once made it into the Guinness Book of World Records: “The sixth sheikh’s sheep’s sick.”

In the course of nearly 20 years of performing word-surgery on science sentences, I’ve managed to pickle a few choice specimens in formaldehyde jars. Every so often, I take them down off my shelves, dust them, and trot them out as “don’t do this” aids in teaching manuscript editing. I’ve chosen six of them to probe and dissect in the hope that some of the cases might suggest procedures for your own practice.

So let’s step into the operating theater and see what caused these victims’ demise. As they say in the old radio dramas, “the names have been changed. . . .” Scalpels ready? Let’s begin.

Patient 1: “Offering superior reliability and ease of use, the Abracadabra 2007 system was designed around our new ShaZam software for the Windows NT platform, rugged, high-sensitivity ion sources, automated methods development, and the ability to analyze hundreds of samples per day, every day, year after year.”

Procedure: Break into three sentences. Assert the company as the subject of a new active-voice introductory sentence. Set off the first three of the four “features” clauses of the second sentence with semicolons and reorder them according to increasing length. Recast the fourth “feature” clause as its own sentence: “United MegaBio designed its Abracadabra 2007 system to be reliable and easy to use. It features automated methods development; rugged, high-sensitivity ion sources; and our new ShaZam software for the Windows NT platform. Now you can analyze hundreds of samples per day, every day, year after year.”

Discussion: Consider changing the features to items in a bulleted list. Also, the final “feature” is not a feature in the same sense as the first three. Rather, it is a benefit, so give it its own sentence.

Patient 2: “By the end of the year, Syntex is expected to market a new thrombolytic drug for strokes named Ticlid.”

Procedure: If possible, specify the agent of “is expected” (who is doing the expecting?). Transpose the product name (“Ticlid”) and its descriptor (“a new thrombolytic drug for strokes”), and set off “named Ticlid” with commas: “Three pharma industry analysts forecast that Syntex will market a new thrombolytic drug, named Ticlid, for strokes.”

Discussion: Forecasts are usually more believable when the subject is identified. Although pharma manufacturers are increasingly refining their drugs to target specific conditions, “strokes named Ticlid” are not yet in their sights. To avoid such confusion, always ask someone who has not yet seen your work to proofread it. It’s the time-tested “can’t balance my checkbook” gambit; you give up in frustration after an hour and your spouse spots your math error in the first minute.

Patient 3: “EPO is a humoral glycoprotein which is produced by the kidney that stimulates the production of red blood cells.”

Procedure: Unless it was already explained, cite the meaning of “EPO”. Change “which” to “that”. Next, move “produced by the kidney” to the beginning to eliminate the two successive “that” clauses that resulted from the “which–that” switch. Delete the final “the”: “Produced by the kidney, erythropoietin (EPO) is a humoral glycoprotein that stimulates production of red blood cells.”

Discussion: Unless your audience is sophisticated about your subject, cite the derivation of all initialisms the first time you use them, and place them after their base expressions. (Exception: If an initialism is much more familiar than its origin, place it first.) The restrictive relative pronoun “that” must be used here instead of the “by-the-way” nonrestrictive or parenthetical “which”. (British-English usage often regards the latter rule as less restrictive.)
Patient 4: “A vast number of competitors are in the market for cell culture equipment throughout Europe, participants range from large important companies, to a number of of smaller specialists in the market, together with the product categories they supply.”

Procedure: Recast the run-on sentence as two sentences. Replace “vast” with something less hyperbolic. Replace the confusing “in the market for” (as a buyer? as a vendor?) with specific usage. Delete duplicate “of”. Trim verbiage: “Many companies vie for the European cell-culture market. Vendors include major manufacturers and smaller competitors that target specific market segments and product categories.”

Discussion: Watch for word-bloat and exaggerated “marketese” in product literature. The 38-word original cited above was slimmed to 23.

Patient 5: “The headend (since it just sent a Go to Sweep message to the remote unit) is expecting to receive a synchronization message 218 ms after the last new user poll message.”

Procedure: Establish a sequential cause–effect relationship between the events by removing the “since” clause from parentheses and stating it first. Change the term “since” to “because” to establish causation and eliminate a possible misinterpretation owing to the temporal sense of “since”—a problem English-as-a-second-language (ESL) readers often say they find troublesome. Switch the less-direct “is expecting” to the straight-on “expects”. Place “expects” in quotes—a machine cannot expect anything. Expand “ms” to “milliseconds” unless it has previously been defined or the audience is so select as to understand it unerringly and will not confuse it with “microseconds” (µs): “Because it just sent a Go to Sweep message to the remote unit, the headend now ‘expects’ to receive a synchronization message 218 milliseconds after the last new-user poll.”

Discussion: In a tug-of-war over space, go for clarity first, brevity second. Some fixes will require an editor to use more words than the original to achieve clarity, but I have found that it’s usually the other way around. In this case, the resulting fix is only two words shorter, so it’s almost a draw. However, the second version is more readable.

Patient 6: “For bioinformatics Service Providers with customers requiring the flexibility and speed to support the deployment of additional bioinformatics resources on very short notice and perhaps for a relatively short period, BioApps.web [fictitious name] is the logical solution.”

Discussion: Blah, blah, blah. The original text typifies a lot of talky-talk scientific marketing prose. Clause builds upon clause until a sentence seems to bloom like a cumulonimbus on a Kansas summer afternoon. The key is to cut to the core of the statements and word them in plain English. Spurious capitalization is everywhere present in current technical prose, especially in marketing collateral. Editors should check with the companies involved for proprietary product names. Change terms to lowercase unless there is clear reason to the contrary. (Exception: Legal terms are often capitalized.)

Chuck of the Month: Will Rogers said it: “Eventually you reach a point when you stop lying about your age and start bragging about it.”

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