Writers should not fear jargon

Researchers use complex language for a specific purpose, and science writers should be clear about what those reasons are, says **Trevor Quirk**.

Who needs jargon? Last month a physics PhD student at the University of Innsbruck, Austria, won a competition to explain the concept of a flame in words that an 11-year-old could understand. Ben Ames, the winner, made a 7.5-minute video, which introduced words such as 'oxidation' and 'pyrolysis', only to parody them.

The very premise of this contest speaks to the aversion we science writers have for jargon. Many seem to assume that the pompous, sterile language of scientific literature has been designed to prevent our understanding it. Reading the stuff seems a kind of sadistic chore. Translating it? Unspeakable. So you can imagine the unpopularity of my belief that jargon is not only integral to scientific discourse but also has a place in public discussion.

Certainly, there is a lot in academic writing that I really can't defend — needless passive phrasing, for instance — but I also think a flip rejection of jargon reflects a greater hostility towards difficult language that pervades modern culture.

When faced with any jargon — scientific, business-speak, legalese — people tend to presume that every term could be substituted with something more colloquial. At first, it might seem unnecessary for economists to use the French word 'tranche' instead of 'layer', 'slice' or 'cut'. But common synonyms are problematic because they can be swapped and easily confused for each other.

Specialized terms capture the complexity and specificity of scientific concepts. Consider astronomy, in which both 'photometry' and 'spectroscopy' denote techniques that could be described in a jargon-free way as 'methods of studying light'.

Yet photometry is the measurement of light's intensity and spectroscopy is the study of its relationship to its source. Both are complex, important and highly specific techniques. No other words in the English language encapsulate their meaning quite as well, and if they are dismissed as jargon, then that meaning is lost.

Scientific literature abounds with distinctions that can seem pedantic. Consider the 'intrinsically photosensitive retinal ganglion cell' — or 'ipRGC'. The term refers to a specific type of neuron located in the eye, and although the phrase is no fun to parse, every word in it is important. A 'ganglion', loosely defined, is a mass of tissue, often found in the eye, so 'cell' refers to a specific part of that tissue. Not all ganglia are found in the retina, thus 'retinal' is justified. And not all retinal ganglia are 'intrinsically photosensitive', so that stays, too. This is perhaps the hardest truth for the more idealistic science writers to swallow. It would take paragraphs of explanation to make all of the other scientific distinctions contained in the term 'ipRGC'. Many science writers would hack away at the term (they call this process 'distilling'), finally calling it, perhaps, a 'special kind of ganglion' or a 'neuron located in the eye'. Such wording is easier to understand but it does not present the whole truth. I am not arguing that science writers should always use jargon, but I do want to point out what can be lost when they do not.

The truth tends to be complicated, and here jargon offers its most obvious perk: compression. There is emotional compression in much writing, perhaps best seen in this (perhaps apocryphal) work by Ernest Hemingway: "For sale: baby shoes, never worn." Technical writers use jargon to compress information. A reluctance to use and engage with it can have serious consequences. Consider terms such as 'credit default swap' — there is a whole backwards school of thought that suggests that these terms were designed simply to confuse and bore people into apathy and inaction. To me, this seems like an oblique justification for not caring enough, and highlights a general reluctance to labour for meaning.

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Jargon requires work from a general readership. But it also requires work from those who use it. Organic and physical chemists speak entirely different languages, as do extragalactic and stellar astronomers, and glaciologists and hydrologists. These linguistic divisions are not created out of the desire to alienate with lofty and overcomplicated language, they are a natural consequence of getting at the unthinkable complexity of the natural universe. To this purpose, jargon is a necessity, as is the labour required to understand it.

Other words are just as labour intensive as jargon. It takes real work to understand the meanings of words such as 'portentous' and 'pretentious' or 'voracious' and 'veracious'; or to make the small but meaningful distinction between 'impel' and 'compel'.

I find it troubling that the same antipathy that some writers express towards jargon has taken root in the public's general attitude towards erudite language. I submit that this is no coincidence. People seem to resent not just specialized language, but any language that requires a large degree of labour to understand, appreciate and use. When hearing someone complaining of having to consult a dictionary — especially when that consultation does not even involve moving from the computer in front of them — I am overcome with the desire to grab that person's lapels and shake them until their teeth rattle. Why are people so unwilling to work for the pleasures and insights that language harbours? When writers avoid jargon unquestioningly, readers start to think that it serves no purpose. The world increases in complexity every day, and we should not let shrink our capacity to describe it. ■

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