



## LYLE'S LAWS

# Lyle's Law of Language

**f**OR A PERSON WHO DOESN'T SAIL, the deck of a sailboat is pretty confusing. Some of the things on and about the deck are unfamiliar and others—such as ropes—are there in such profusion that it is hard to know just which one does what or why. The old square-rigged sailing ships of the 18th and 19th centuries were even more complex. While a modern sloop has eight or ten ropes, the older square-riggers had many dozens.

Wait. Time out. The sailors among you are asking, “What’s with Lyle? Boats don’t have *ropes*, they have *lines*.” Well, you’re right, but I thought I’d bring the non-sailors along gently. Let’s clarify it, though; the tradition is that a rope is a rope as long as it is on a spool in a marine store. As soon as it is cut to length, taken aboard a boat and assigned a function, it becomes a line. So, there is your useful nautical fact of the day.

Now back to the square-riggers. What wonderful, beautiful machines they were! They were driven through the sea by dozens of sails: fores and mains and mizzens, courses, topsails, topgallants, royals, skysails, spritsails, jibs, staysails, and even one called a spanker. These sails have heads, tacks and clews, a leech, a foot, and a luff. They are controlled by *lines* called halyards, braces, sheets, buntlines, outhauls, downhauls, reef points, and many others.

Sound confusing? You bet. And the situation would have been impossible if each one of those lines didn’t have a name and a place. The starboard foretopsail brace, the main yard sprit outhaul, and so on. The only way the ship could operate was if every sailor “knew the ropes” and could find the right line in the dark of night on a rolling deck. And you couldn’t have the boatswain giving the order, “Okay, you guys. Pull in the whatchamacallit.” No, to make it work, everyone had to follow the principles of Lyle’s Law of Language: *Call everything by its right name*.

There are several things that can lead to the violation of this law; one is plain old-fashioned ignorance. A 21st-century engineer can be forgiven if she doesn’t know the name of the line that controls the angle of the third sail from the bottom on the main mast of a square-rigger. She must, however, know the terminology of her field.

There are various educational taxonomies that classify the kinds of learning according to the level of intellectual challenge involved. The lowest or simplest category is generally memorization, or the learning of definitions. Because it is not considered very challenging, many professors think they should devote very little attention to teaching terminology. I disagree. Students must learn the

terms that define their fields and not only be able to provide a rote definition, but also understand the fundamental meaning and usage of the word. Students and practicing engineers can do themselves a big favor by keeping a list of new words and—surprisingly—new meanings for old words. You can’t call things by their right name if you don’t know the name.

While knowing the names of things aids in communication, it also helps the thinking process. Indeed, a case can be made that you can’t think about something unless you have a name for it. Try it sometime. Can you think about something that doesn’t have a name?

A corollary to Lyle’s Law of Language is: *Eschew euphemisms*.

A euphemism is a word or phrase that is used in place of another word or phrase and is generally used to soften or obscure the message being delivered. “I am experiencing financial difficulties” is less harsh than “I have just declared bankruptcy.” Both statements are true, but the latter is more precise. It calls the thing by its right name.

In the spirit of full disclosure, I will point out that this law is taken directly from the writings of Confucius. One of the many things he said is, “The beginning of wisdom is to

call things by their right names.” When I was a dean, this phrase was used from time to time in our staff meetings. For instance, we sometimes had to deal with cases of students *copying*, *collaborating*, or *lifting answers*. The beginning of wisdom was to say they were CHEATING, a thoroughly reprehensible activity that should disqualify the perpetrator from entering the engineering profession. With the malefaction properly named, we could more effectively—if not more easily—deal with it.

I have to admit that using the right name is not always as easy as it sounds because rightness, like beauty, is in the eye of the beholder. Or more precisely, the brain of the hearer. President Bush learned this when he referred to the invasion of Iraq as a great crusade. The word has come



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to mean any major campaign undertaken with great zeal and noble motives. Many people in the Arab world, however, remembered the original meaning of the word—a military expedition by Christians to take control of the Holy Land (crusade is derived from the Latin *cruc*, which means cross). I'm not sure the President ever started calling the invasion by its right name, but he wisely stopped calling it a crusade.

I guess this is as good a time as any to get on one of my favorite soap-boxes and address the “comprise” situation. Calling things by their right names also means using the correct word and using the word correctly. Comprise is a useful word, but it has been misused unmercifully. I first got serious about the word some 40 years ago when I was reading patents and read something like “The circuit comprises two AND gates and two OR gates.” My first reaction was to think they used the word incorrectly. My second was to realize this would not happen in a patent—those folks have to be precise. I then studied up on the word and determined that, lo and behold, *I* had been misusing the word. Blush.

Comprise, it turns out, means almost the same thing as “include,” except that it is comprehensive. That is, to comprise is to include everything. As an example, a football team comprises 11 players and includes two tackles. An orchestra may comprise 17 instruments and include five violins.

Somewhere in the past, however, something went astray and someone started using *comprised* when he meant *composed* and the unfortunate phrase “comprised of” was born. Going back to the definition, this is comparable to saying “included of.” While “comprised of” is regrettably common, most people consider it incorrect. It is to be avoided.

So, call things by their right names. Eschew euphemisms. Use the correct word. Use the word correctly. Cast off the bow line. Haul in the jib sheet. And I will go splice the main brace. Splice the main brace? That's not really a euphemism, just another bit of nautical terminology. Old sailors may know what it means.

—Lyle D. Feisel, Ph.D., P.E.,  
Iowa Alpha '61

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