

DEPARTMENTAL CORRESPONDENCE

SUBJECT: Wordsmithery

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TO: All Engineering

Introduction

Over the years, as I have been doing my important jobs of plagiarizing people's writings for activity reports, reading documents, and attending meetings and presentations, I have occasionally run across literary problems, something which could stand a change — a comma, a hyphen, etc. Individually these literary *faux pas* mean little, but over the years I have felt the pressure of accumulation, and I figure it's now or never to share this vast experience and save the world by issuing guidelines for word stuff.

I grew up in a literary environment. [Typical supper table conversation: ME: It was terrible at school today. Dolores Martínez was hit by a car crossing the highway and isn't expected to live. I don't know how often they've warned us about that. Mr. Summers was caught with a twirler in the uniform closet. And the boiler exploded. We'll have to move to the other school for six weeks. Hal's mother died, and Tom got his girlfriend Dell's sister Beth pregnant and she has to go to México. Chico was caught late last night by one of those marijuana-smoking chain gangs and beat up. THEM: Don't pronounce the "t" in often.]¹ This has given me a sensitivity to spelling, grammar, punctuation, etc., that is above average.

The things I'm going to assert below as facts are really just arbitrary conventions and traditions more or less agreed upon by "authorities" over the years. Sometimes they're logical and sometimes not. Sometimes they're opinions, but don't underestimate the passions a good grammar argument can raise! I put it all forward as good rules to follow around here, which will ease the reader or listener along. I will also deal with some other matters, like foreign languages and pronunciation.

It must be acknowledged that engineers today write and speak better than they did in 1956 when I started. In spite of viewings with alarm and forecasts of literary doom in the news media, current graduates are, on average, noticeably superior. This having been said, however, improvement is still possible. Let's forge ahead.

Commas

Commas are critical to flow and meaning in English. The trend in this century is to minimize their use. In the 1800s we suffered from what my Technical Writing prof called "many-comma'd prose." (In fact he caught a student who carelessly copied "his" report from a 19th-century encyclopedia this way.)

The most lethal comma blunder is the comma between the subject and predicate.
Example:

"Software and hardware, are both important."

¹ All of this actually happened, but not on the same day.

Don't do it. If you see a comma before a verb, it's almost always wrong.

The comma before "and" in a series is a problem. When I was in school, it was required. Later on, maybe the '60s, in the spirit of comma minimalism, it disappeared. Currently some authorities show it and some don't. (Yes, Virginia; authorities often disagree and are sometimes provably wrong. *Caveat lector.*)

Set off dates and places with before and after commas:

Rome, Italy, is a nice place to visit.

He was born October 2, 1934, before the ballpoint pen.

Commas are often used in long numbers to make them easier to read. I was taught commas should be used only for five digits and up, but it may be necessary to use them with four to line up digits in a column. Some people use them in isolated four-digit numbers; this is not wrong, but it is unnecessary.

When to use commas between adjectives is a little subtle, and I've never seen an adequate rule stated. What I was told is, if the group after the adjective stands alone, don't use a comma; if you need two or more adjectives to get the sense, use commas. Or if the adjectives are of the same "nature" (?), use commas; if they describe different properties, don't.

Long, winding road	O.K.
Tall, thin man	O.K.
Big, bad wolf	O.K.
Big bad wolf	?
Big Red 1	By convention
Big, Red 1	Probably not
Long, long trailer	Always use with repetition for emphasis
Big blue eyes	Depends
Non-stop, coast-to-coast flights	No

In Scientific American: "Up to half the nearest asteroids might in fact be dead, short-period comets." This comma is in error because the article was about short-period comets, and the whole phrase acts like a noun throughout; it's not like dead and short-period. (In the old days Scientific American had some of the best technical writing around; in recent years numerous editorial errors have been appearing.)

Some style manuals give this problem short shrift, saying only to use commas between adjectives always. Editors who use this slavishly come up with funnies like "red, file cabinets," or "baby, blue eyes." Think hard.

Possessives

The usual rules apply: 's for one thing possessing, s' for more than one or something ending in s possessing. Of course we have "it's", which is not a possessive, and "its" which is, to confuse foreigners. (And some engineers.)

Plurals

Plurals are a problem. Especially in English. Since English, and especially American English, is polyglot, we have to decide among many pluralization (more about “ization” words later) rules. The basic English rules are the simplest and best: add s or es and change y to ie when necessary. (Weeklies, not weeklys.) Spanish and a few other languages do this also. Unfortunately we have Latin, Greek, German, Italian, etc. etc. to deal with. Now pay attention:

“data” is plural. (Singular: “datum”)
“criteria” is plural (oft misused) (Singular: “criterion”)
(Pronounce the t in “oft.”)
“MIPS” is singular. Plural is MIPSs, pronounced
“mipses.” (Beware of acronyms ending in “s.”)

RPM is singular and plural. (Don’t use “RPMs.”) It’s “Johns” Hopkins, not “John.” (Is this a plural problem?) Latin and Italian plurals depend on the ending of the noun, and don’t use the same rules. (The Roman Catholic church’s official pronouncers decided way back when that Latin should be pronounced like modern Italian. Surprise! But there are also medical Latin, lawyer Latin, and, of course, Anglicized Latin, in which “Veni, Vidi, Vici,” called “Vainy, Veedy, Veechy” in church, comes out the Fuddian “Weny, Widy, Wicky.” Nobody Anglicizes like the English.

<u>Singular</u>	<u>Plural</u>
status	stati
vacuum	vacua
axis	axes
phenomenon	phenomena
plenum	plena
forum	fora
focus	foci
locus	loci
bonus	boni
pagliaccio	pagliacci
medium	media

You get the idea. Sometimes the “real” plural is more accepted (e.g. “data”) and sometimes the English-rule version is. You have to decide if you want to say “stati” and be “correct” or say “statuses” and hiss like a snake. Don’t forget: you can’t eat a tamale, it’s a “tamal.”

Acronyms and Abbreviations

Many times abbreviations are miscalled acronyms. They are not, unless they can be pronounced. Many lists headed “Acronyms” also contain abbreviations. Watch it.

I was taught that abbreviations should not be followed by a period unless they spell a word. There are exceptions to this, like “sin.” It makes no sense to lengthen an abbreviation with another character. But many always have a period, like “etc.”

The case of the characters in abbreviations must be followed, especially for units. K is kelvins, k is kilo, for example. Units named after people are not capitalized (ampere, volt), but their abbreviations now are! (A, V) (This is a change which occurred sometime in the last forty years.) People’s names which are not units are capitalized as

usual, as in Reynolds number, Mach (or Mach number), Dewar, Doppler, and Planck's constant. Trade names are capitalized; e.g. Ethernet and Korothen. E.g. stands for *exempli gratia* (GRAHT-see-ah in church); et al. is *et alia* for one other, *et alii* for more — hardly worth abbreviating. (Note that these and many other “standard” abbreviations usually use periods, in violation of the rule; *et al* often doesn't.)

Don't make up your own abbreviations. Unfamiliar ones will only slow or stop a reader. Examples are “mths” instead of “mo” for “months” and “bld” instead of “bldg” for “building.” If you need a new abbreviation, try not to use one that already exists as something else. You'll end up like “CD”: Concept development? Certificate of deposit? Compact disk? Cadmium? (I know cadmium uses a lower-case d; don't call.) And if it spells a word, think hard. Don't use “anal.” for “analysis,” for example.

Acronyms should be all capitals. FAX, not fax. (Who remembers this is corrupted from “facsimile”? Who remembers why? Because of TWX (pronounced “twix” — Telegraphic Wire Exchange). But there is an evolution of acronyms. Consider RADAR. This originally stood for Radio Direction and Range. (There are other versions, but this is what we were told in the early '40s.) Now it is used all lower case with no thought of its acronymic basis. Consider LASER. This was named following the MASER — Microwave Amplification by Stimulated Emission of Radiation — and supposedly derives from “Light Amplification by Stimulated Emission of Radiation.” This is not exactly what happens, so it's a misnomer. But worse than that, in English a noun “xer” is assumed to have arisen from a verb “x.” So people have created the verb “to lase.” “I'm going to lase you.” Etc. Watch out for acronyms ending in “er.” (LASER is also now lower case.)

The abbreviations for the decimal multipliers (kilo, etc.) are fairly uniform. Above unity they are capital letters, and below, lower case. Except kilo is lower case. (I guess because the thermo guys wanted to save K for kelvins, and they won. Too bad.) The prefix giga is interesting. I was taught to pronounce it with a “j” g. Since it is Greek, this is correct. There are no hard gs before I in Greek. Hard gs before I and e come from the Germanic languages. Nevertheless, my secretary's dictionary shows the hard g as an alternate:

Main Entry: giga-
Pronunciation: 'ji-g&, 'gi-
Function: combining form
Etymology: International Scientific Vocabulary, from Greek gigas giant
: billion <gigahertz> <gigawatt>

There is absolutely no basis for this and I don't know who started it or why so many people mispronounce it. Maybe it comes from “Gig ‘em, Aggies.”

In computers, B is byte and b is bit. This is nearly standard, though many publications and data sheets are careless about it. So you see “mb”(millibit) when they mean “MB.” Note that memory is in bytes and communication speeds are in bits per second. (Remember when CDC had six-bit bytes?) Random access memory is RAM, not ram.

Think about what an abbreviation stands for or you may be redundant. “CAP plan,” CDRL list, PC computer, and “IPT team” are examples.

The use of a slash (/) in abbreviations connotes that the second letter is in the same word as the first, not two words. S/W for software is an example. But be careful; there are exceptions: A/C - air conditioning; HP - horsepower.

B&PE (bidding and proposal expenditure) is sometimes called BP&E. Don't.

“ization”

It has been observed that some of the worst literary atrocities involve words constructed with “ize” or “ization.” Government stuff is replete with these. The dictionary (my 1959 dictionary bequeathed by a departing secretary; was there a message there?) provides for these [\[updated to 2001 dictionary\]](#):

Main Entry: -ize
Function: verb suffix
Etymology: Middle English -isen, from Old French -iser, from Late Latin -izare, from Greek -izein
1 a (1) : cause to be or conform to or resemble <systemize>
<Americanize> : cause to be formed into <unionize> (2) : subject to a (specified) action <plagiarize> (3) : impregnate or treat or combine with <aluminize> b : treat like <idolize> c : treat according to the method of <bowdlerize>
2 a : become : become like <crystallize> b : be productive in or of <hypothesize> : engage in a (specified) activity <philosophize> c : adopt or spread the manner of activity or the teaching of <Platonize>
usage The suffix -ize has been productive in English since the time of Thomas Nashe (1567-1601), who claimed credit for introducing it into English to remedy the surplus of monosyllabic words. Almost any noun or adjective can be made into a verb by adding -ize <hospitalize> <familiarize>; many technical terms are coined this way <oxidize> as well as verbs of ethnic derivation <Americanize> and verbs derived from proper names <bowdlerize> <mesmerize>. Nashe noted in 1591 that his coinages in -ize were being complained about, and to this day new words in -ize <finalize> <prioritize> are sure to draw critical fire.

This doesn't mean they should be used with wild abandon. They are long and awkward and sound contrived. I try not to use them.

Instead of:

definitize
definitization
finalize
finalization
conceptualize
conceptualization (7 syllables!)
summarization

Try:

define
definition
finish
completion
conceive
concept
summary

and so on. Some dictionaries distinguish between some of these words; some don't. If “definitize” means something to you that “define” doesn't, then use it. But be aware what you're doing to the fog factor².

Verbs & Nouns

In the evolution of words adjectives become nouns and nouns become verbs. “Video,” originally an adjective, is now also a noun (“Let's watch that video.”) and a verb (“I'm going to video the kids.”) “Disposition,” a noun, is sometimes a verb (“We need to

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disposition that.”) There are a lot of these around, but don’t use them unless you’re sure they’re accepted. “Storyboard” is used as a verb.

Hyphens

Hyphens are indispensable in technology. It’s our way of manufacturing new words and describing complex things. We use them mainly in compound adjectives. It is proper to use hyphens between adjectives (“angle-of-attack meter”), but not between adverbs and adjectives (“explosively formed projectile”). Just because a combination may use hyphens when it’s an adjective, don’t use hyphens all the time (“high angle of attack,” “state of the art”). Hyphens are needed with units if they modify: 16-hour test, four-day walk, ten-ton bomb, etc.

One Worders

While it’s important to know when to hyphen, it’s just as important to know when not to. The most common thing I fix in writings is hyphenation or separation of single words. It’s true that many current single words started life hyphenated, or even split, but over time they’ve become integrated. Here is a list of some which are one word but came to me (some many times) split or hyphenated:

subset	laptop	paperwork
subcontract	handwritten	corkscrew
groundwork	rebuild	nonlinear
reinstate	strawman	breakout
textbook	backlog	standstill
blueprint	highlighted	monopulse
rescheduled	redefinition	rewritten
wartime	peacetime	standalone
waypoint	upcoming	overshoot
footprint	manpower	ongoing
workstation	shakedown	waveform
airframe	shortcoming	paperwork
writeup	offset	kickoff
aimpoint	benchmark	checkout
downscope	overtime	manhour

If in doubt, look it up. Some words have not evolved yet, like, surprisingly, write-up. Some probably never will, like electro-optical.

Will and Shall

Among the things you learned in the fourth grade were the will and shall rules. Follow them. This shows up in specs. In the first person (I, we) “will” indicates intention; in the second (you) and third (he, they) mere futurity. In the first person “shall” indicates mere futurity; in the second and third authority or compulsion. (God uses “shalt,” but she is old-fashioned and probably is not yet on-line.) (Or is it online?) Check out the dictionary:

Main Entry: shall
Pronunciation: sh&l, 'shal
Function: verb

Inflected Form(s): past **should** /sh&d, 'shud/; *present singular & plural shall*

Etymology: Middle English shal (1st & 3d sing. present indic.), from Old English sceal; akin to Old High German scal (1st & 3d singular present indicative) ought to, must, Lithuanian skola debt

Date: before 12th century

verbal auxiliary

1 archaic a : will have to : **MUST** b : will be able to : **CAN**

2 a -- used to express a command or exhortation <you shall go> b -- used in laws, regulations, or directives to express what is mandatory <it shall be unlawful to carry firearms>

3 a -- used to express what is inevitable or seems likely to happen in the future <we shall have to be ready> <we shall see> b -- used to express simple futurity <when shall we expect you>

4 -- used to express determination <they shall not pass>

intransitive senses, archaic : will go <he to England shall along with you -- Shakespeare>

usage From the reams of pronouncements written about the distinction between *shall* and *will*--dating back as far as the 17th century--it is clear that the rules laid down have never very accurately reflected actual usage. The nationalistic statements of 18th and 19th century British grammarians, who commonly cited the misuses of the Irish, the Scots, and occasionally the Americans, suggest that the traditional rules may have come closest to the usage of southern England. Some modern commentators believe that English usage is still the closest to the traditionally prescribed norms. Most modern commentators allow that *will* is more common in nearly all uses. The entries for *shall* and *will* in this dictionary show current usage.

Miscellaneous

(Every collection needs a miscellaneous.)

Pet Peeves

I have a veritable zoo of pet peeves, not all literary. Here are some: (Most are widely used, keeping me in a constant state of annoyance.)

“Healthy” vice “healthful,” as in “healthy food.” The food may or may not be healthy. The question is whether it’s healthful.

“Feel badly” You may feel badly if your nerves are shot, but if you don’t feel well you feel bad.

“Close proximity” Redundant. There’s no such thing as far proximity.

“Monday,” etc., with “day” pronounced “day” instead of “dy.” My 1959 dictionary only shows “dy” for all “day” words, and that’s how I was raised; but new dictionaries allow “day” as a second pronunciation.

“Hot temperature,” “cheaper price,” etc. Temperature and price can be low or high, but not hot or cheaper. They are attributes, not measurements.

“Quantum jump” People use this to characterize something large or important. In reality, one quantum is the smallest possible change.

“Baud rate” Baud is a rate (one bit per second). Baud rate would be an acceleration.

“Wherefore” used as “where.” It means “why.”

“Forehead” pronounced “fore-head.” Far-ed is the first pronunciation.

“Memento” for “memento.”

“Attendee” This is used for one who attends. I say it should be “attender;” “attendee” should be “one who is attended,” as “employee” is one who is employed. No authoritative source agrees with me, so they’re all wrong, based on inconsistency and illogic.

Cutting something “in half.” For physical things like rolls or targets, they can’t be cut in half. You can cut them in two, even in halves, but not in half. Expenses or temperatures can be cut in half, but not things.

Other Word Things That Didn’t Make the Peeve List

Saying something is “comprised of” some things is an error. “Comprise” means to include or gather together: “The U.S.A. comprises 50 states.” The phrase “comprised of” would be like “included of,” a syntax blunder.

You can write “résumé” without the accents, but if you use one, use both. (I’ve seen one dictionary which allows, as third choice, only the second accent; this is totally without basis and is the kind of permissiveness which is corrupting our youth today.)

Don’t use “contingency” when you mean “contingent.” “As per” is not correct when you mean “per.”

“Preventative” is an “irregular” form of “preventive” at best. I consider it an error. As there is no word “prevention,” there shouldn’t be a word “preventative.” (Although we have “connotation” from “connote.” Go figure.) Some dictionaries give “preventative” as a “problematic variation.”

Don’t use “independently of” for “independent of.”

Don’t use “creditable” when you mean “credible,” (Look ‘em up.)

Don’t use “homogenous” when you mean “homogeneous.” (Also look ‘em up.)
Imply/infer. Things imply, people infer.

Careful of the difference between “lightning” and “lightening.”

Don’t use “gambit” (a chess term) when you mean “gamut” (a musical term).

Don’t say things like “The launch date is scheduled for 13 April.” This is nonsense; you don’t schedule a date for a date.

“Documentated” is not a word.

Appraise/apprise: Don’t mix ‘em up. Appraise is to evaluate; apprise is to inform.

“Myriad” actually means 10,000, although it is commonly used for “lots.”

“Decimate” has a precise meaning. Decimation was the Roman practice of executing at random every tenth soldier if they lost the battle. My dictionary says “to destroy a large part of” only as the third definition.

Don’t refer to yourself in a document as “the author” or “the undersigned.” This is archaic and stilted.

“New innovations” is redundant.

Don’t use “complimentary” for “complementary” or *vice-versa*.

“Reoccur” is not a word. Use “recur.”

Don’t use “predominate” for “predominant.”

Don’t use “quite unique” or “very unique.” There are not degrees of uniqueness.

Don’t spell “Northrop” “Northrup,” which, however, exists. Check which one you want.

For some reason, some words are often mispronounced. Several of these are:

- asterisk (I’ve even seen “asterix” in print.)
- et cetera
- peripheral
- nuclear
- statistics

Your friends may not tell you. Think hard about it; check yourself; make a tape.

“Contractural” is not a word.

“Enclosures” are for envelopes. For memos, etc., use ‘attachment’ or ‘annex.’

The abbreviation for nautical mile is nmi or NM. “nm” is nanometer. And meter is “m,” not “M.”

Vu-Graph. What to do about Vu-Graph. Vu-Graph (this is the correct term, not Viewgraph or any of the others) is a name copyrighted by Besseler of Germany. It joins the ranks of Autopilot (Lear), Kleenex, Coke, Victrola, Kodak, and a bunch of others as a trade name become generic. The actual generic terms are awkward things like viewfoil, overhead (one of those adjectives-become-nouns), projection transparency, and slide. So almost everybody uses some form of Vu-Graph, spelled somehow and usually not capitalized. When showing Vu-Graphs, darken the room and focus the image. Set the image size right by the projector-to-screen distance, and use a pointer. In any presentation, listen carefully to questions and only answer only the question asked, as briefly as completeness will permit. Don’t ramble, digress, or elaborate. Try really hard

not to say “I’ll answer that on a later chart.” If you have handouts, always have enough copies for everybody.

There are no such things anymore as “clock number” (use “employee number”), “labor grade” (use “grade” or “salary grade”), or “time card” (use ELECT screen or time screen). (Of course there are time cards used to back up late ELECT screens.) (And watch out: Bryan Brooks calls RAM “core.”)

Abstract. When you include an abstract in a document, it must contain the actual main result or conclusion. It is not an introduction or general description.

Graphs. If you use graphs, include scales and labeling. Normally don’t suppress the grid; you may suppress the information. (But don’t make it distractingly fine or aggressive, either.)

Among/between. Between two things, among more than two. Always.

Watch out for homonyms: vein/vane; pore/pour; roll/role; principal/principle; affect/effect. Look ‘em up.

International

As you have noticed, we are having more and more activity with foreigners. I would be remiss if I didn’t deal with this. It’s nice if you can pronounce your customers’ and their companies’ and countries’ names, order a drink, pay the taxi driver, and order dinner.

English is often cited for being difficult. And so it is. It is a language where “fat chance” means “slim chance,” “fill in” is the same as “fill out,” “give up” means “give in,” and “on the shelf” means “off the shelf.” In spite of these and many other problems, it is the most widely spoken language on the planet (due to Coca Cola?), and people who deal with “Americans” (by which by convention is usually meant U.S. citizens; but Chileans, for example, are Americans too.) know they’ll be expected to speak and understand English (American English). Of course, the French are an exception. They steadfastly refuse to speak English unless it’s absolutely the only way they can get your money. If you visit France, take a phrase book to deal with taxi drivers, who will be Vietnamese speaking English with a French accent.

When you are presenting or talking to non-native English speakers, be alert and don’t use colloquialisms or idiomatic expressions. Examples:

Can’t get to first base
Our tail between our legs
One up (or oneupsmanship)
The shoe’s on the other foot
Built like a Tinkertoy
Built like a brick —
Giving us the runaround

In spite of the ubiquity of English, it may be helpful to know something about the languages of our customers. I will give you some hints.

My credentials are that I’ve studied Spanish and French and grew up amongst Spanish speakers (Mexican or Tex-Mex, not Spanish Spanish). I have visited France (and

México). My mother and her mother spoke French and German. Through music, especially opera, I have been exposed to Italian, Russian, Czech, Hungarian, Swedish, and other miscellaneous languages. In addition I have worked with some of our Chinese-speaking engineers for years. My ex-wife studied Portuguese (To speak Portuguese, clench your teeth and speak French.) and I have eaten at a Greek restaurant. I speak a little Arabic. (1, 2, 3, 4, etc.) and have seen several Japanese movies.

Chinese is the best language. It has no plurals, no gender, no tense, no capitals, no articles. All words have only one syllable. However, their ideographic writing is formidable and algebra is difficult.

Japanese is like Chinese except they have multiple syllables. The accent is usually on the second from last syllable, if there is one. (Tokyo, Hiroshima). In many cases the Japanese drop the last syllable when speaking. "Hitachi" sounds like "EEtots." When questioned about this they don't know what you're talking about. The transliteration of all Asian words and names are often misleading. When introduced to an Asian, listen carefully and do your own. Don't rely on a business card. ("Hyun" is pronounced "Shawn.")

French is tricky. They don't pronounce the ends of many words, unless they're singing! For some reason sung French says it all (or almost). The pronunciation of the part they do pronounce is pretty uniform, however. Not nearly the variety we have in English. If a French word ends in a silent consonant and the next word starts with a vowel, use that consonant to start the next word. Lots of English words started as French, like cigarette and pullet. Many French words and phrases are used in English unchanged, except sometimes in pronunciation. Examples are "coupe" ("coupé," koopay — past participle of "cut"), "chaise longue" (often pronounced "chase lounge;" why, I'll never know; correctly "shez long"), lingerie (widely called "lanjeray"; in French "lahzheree," "a" nasal), and "mauve" (called "mauv," in French "mohv"). There are no voiced accents in French; the written accents are for pronunciation, not stress. This is hard for those of us reared on English and Spanish to swallow. If you ever try to speak French, use no accents.

The great strengths of the phonetic languages (mostly "western") is that all the words and sounds are represented by a small character set. For those of us who use the Latin alphabet this is also a source of great mischief. All these languages which use the same letters, from Hungarian to Spanish, use different pronunciation rules! Latin, Italian, and Spanish are similar, but then it diverges. People who get the letters without the rules and sonic examples have to fend for themselves. This was the way it was in the old days, but with satellites and TV and mucho language software, there's no longer much excuse for anglicizing everything. This will at least give us the opportunity to pronounce the names of places and prominent people correctly if we choose (assuming the newscasters get it right — not a given). But should we start saying Pahree instead of Paris? Moscvah for Moscow? Lyehnyeen for Lenin? We might lose our listeners. A decision to be made.

Spanish is a good language. All letters are pronounced (except h, which is silent), and pronounced the same all the time. There are regional variations: Spain and Mexico have differences; Cuban Spanish is distinctive; etc. But it's mostly regular and well behaved. (The language, she does have gender, however.) And it's spoken by most of the Western Hemisphere. We haven't developed any big-time Spanish-speaking customers, though.

The non-English Latin-alphabet (and also Greek) languages depend on diacritics (accents, etc.) They are important. In Spanish, for example, “mi” means “my,” while “mí” is “me;” “si” is “if” and “sí” is “yes.” In French the “accent acute” (´) used on e means to pronounce it; the cedilla on ç gives it the s sound, as in Français. An umlaut in the Germanic languages changes the pronunciation. Etc., etc.

German pronounces all its letters. But it allows for bewildering concatenations of adjectives and nouns to manufacture words. This gives things like Feuerwagonsversicherungsgesellschaft — fire engine insurance company. (Baldwin *gratis*.) Note that it’s capitalized. Germans capitalize all nouns wherever they appear.

I have many multilingual recording notes and libretti. Up to four languages side by side. (I know it’s an incomplete sentence, but you have to imagine the omitted words —) What you find is that the space required for English is always least. So for all its faults English has efficiency (thanks probably to the Anglo Saxons). And, while there are a lot of rule exceptions, you can make up your own words (like “wordsmithery”) and be understood: add d or ed to make a verb past; add s or es to get plural; no gender; you don’t have to use the articles; add ing to get a gerund or participle. (“We will be missing tomorrow.”) When you’re dealing with your foreign customers, you’ll get a lot of that; get used to it. The most grotesque atrocity from such constructions I know of comes, not from foreigners, but Americans. They use the abbreviation of the French <<Répondez, s’il vous plaît>> (“Reply, if you please” — note the weird French quotation marks), R.S.V.P., as an English verb: “Have you RSVPd yet?” I’ve tried to no avail to teach my wife to say “have you Rd yet?”

But you’re not home free with English, especially British English. If you go to England, remember that “Featherstonehaugh” is pronounced “Fanshaw.”

Russian has several problems for English speakers. It is, of course, in the Cyrillic alphabet, which is not Latin but has some Greek roots and some letters which look Latin. They aren’t. If you’re tempted to pronounce Cyrillic words, don’t try it. Wait for a transliteration. Unfortunately, Latin alphabet transliterations of Russian come through French. (There are reasons for this.) If you pronounce them like French you’ll be close. I remember that years ago some American wrote the Russian embassy asking how to pronounce and transliterate the name of the Russian technologist Chebychev. The reply had about seven versions with a lengthy discussion of each; “Tcheybietcheff,” etc. You can’t start it with “ch” because “ch” in most languages is pronounced “k,” and so on.

Many consonants in Russian are palatalized. In English this adds a “y” to the sound. So the name Kabalevsky” is pronounced “Kabalyevsky.” Rachmaninov” is “Rachmanyinov.” Unaccountably, transliterations seldom represent this, even though it would be easy. Don’t try to guess where these ys go unless you know the rules (which I don’t).

The other funny about Russian is that the words change according to the sex of the person being addressed.

We don’t know whether we’ll be dealing with Russians as friends, foes, team members, customers, or consultants, but it’ll be something.

Other Info

I call your attention to the attachments. Attachment 1 is some material on writing clarity extracted from our proposal-writing manual. It's good stuff, and applies to all writing, not just proposals. The Fog Index is defined therein. Attachment 2 speaks to clarity in scientific writing. It's brief but gives us something to think about. Attachment 3 has some quantitative information on the difficulty of reading scientific writing. I found it interesting. I apologize for the unclarity of the sidebar on the second page. If you can't make it out and want to, check the original source in some library.

Dessert

We engineers average about semi-literate. The most fun manifestation of this I've encountered over the years are the mixed and other metaphors I've heard at work from engineers. They know there's something there, and they're bursting to make a point, so they unleash their brains with startling effect. I started keeping notes one day when, in a meeting at his desk, Chuck Stellmaker came out with "We have to bite the bull by the horns!" I knew I was on to something. I thought that I was the only one who noticed such things and that I could collect and publish them and make millions of dollars. I subsequently found that this stuff is rampant in the world and that others had already published many books and articles on mixed metaphors; my hopes were dashed. I still think those from engineers are exceptional and have a certain style, so here is my collection. To give you the fun of figuring them out, the original sayings are not quoted. It usually takes at least four engineers to figure one out. If you look at any of these and say "What's wrong with that?", you're an engineer.

First, one of the most famous —

We need to wave a red herring!

Others:

They're making money head over fist.

I'm a babe out of woods.

He knows where the skeletons are buried.

Greener than a gill.

Like a breath of fresh water.

She's trying to soak it all in.

Keep morale on a high keel.

I just about fall out of my teeth!

It'll be a shirttail meeting.

We've got to get to the bottom of the truth.

It's a two-headed sword.

The ball is in their pocket.

New terms are being battered about.

He'll have to go back to ground one.

Sell them down the tube.

I hope I don't have to eat turkey!

He really took a blood bath on that deal.

It's really a land mine of information.

That guy really gets to my goat.

That's a bunch of crock!

*I don't want to rattle the tree right now.
He came out on the short end of the straw.
He's really a green horse at that.
It's a mob house!
They're taking the easy road out.
How much to bite off the bullet.
That clinched it!
The negative side of the coin.
Burgeoning at the seams.
He moves into full kilter.
Shake the bushes.
He's not wet behind the ears yet.
They kept that info close to their belt.
She's always pulling things over on me. (Meaning "I'm a pushover.")
Full blare.
Dropped through the bucket.
We're in dead water.
When worst comes to shove.
He beats around the mulberry bush.
Busy as a hornet!
Deadheading (for dead-ending; a blocked pump.)
This is his dream child.
We have to pull the irons out of the fire.
It's a chicken and head problem.
It's been a thorn around our neck.
Is that going to be a ball of snakes?
Try them on for size and see if they float.
Finally we threw our arms up.
We pulled all the strings out on that one.
Pulling one over on us.
The leading edge of the iceberg.
He was able to delve it up.
Not out of the woodshed yet.
He's up against the gun.
Green behind the ears.
It makes your hair stand on edge.
There's something in the seat of my pants that makes me think that
They're going to shovel it under the rug.
The greasy wheel gets the grease.
He's mad as a wet hornet!
We need a way for the new guys to get their fingers wet.
We walk a ticklish tightrope.
By the skin of my chinny-chin-chin.
All their chips are in a row.
That's a thorn under our saddle.
We've just barely gotten our feet off the ground.
He was frothing at the bit!
We're going to be back at ground zero.
We're jumping at straws.
Keep your nose to the ground.
We're walking on pins and needles.
Like a bull in a china closet.*

*I think we can tickle those itches.
There's a move underfoot to
You need to fork up the money.
Don't shake the boat.
I'm singing to the choir.
I haven't dwelled into that.
Don't bite off that bullet yet.
You've got to bear your own crop.
We've got to roll off the onion.
I don't want to cast dispersions.
Have you gleamed enough from that?
That went down the drink.
It has risen to the front burner.
I've blown my word.
Put it in the context of the way things evolve.
We had to arm-wave that problem away.
I hope that will lay it to bed.
He was wool grazing.
Smooth as clockwork.
They faced the bullet and bought the bullet.
When the smoke settles....
He put the cat on the street.
Hold his hand to the fire.
The whole thing is still up in arms.
She reamed him over the coals.
We bellied-up the money.
I'm going to rattle the boat.
I'm going to throw a monkey into it.
I'm going to get myself a little redeye.
It's going to be judged cold turkey.
Each option should stand on its own weight.
I would have a guilty complex.
Verbal tonguelashing.
He's out in left wing.
Let's just plan it by ear.
Chafing at the bit.
We lost our trend of thought.
We're going to take off the kid gloves.
They're living mouth-to-mouth.
I'll be top dog on the ladder.
The RFP has hit the floor.
It's going to pot in a breadbasket.
See what he can dredge up.
They're on the bottom of the rung.
They're turning down the wicker.
He has it in the back of his eye.
We're going to have to do some fishing and cutting bait.
One side of either coin.
Top-of-the-head gut feel.
The hard bullet is going to be....
Wrapped around the flagpole.
Smart as a tack.*

*Hung by your own petard.
They leaned overboard to be fair.
I'm going to throw in the hat.
He's really low-collar.
By the time the smoke settled,...
That was a watermark in her career.
I just got my wires confused.
He's going to have to get on the 8-ball.
It finally dawned home to me.
This enables you to hone in on....
It's a loaded deck.
It will be wiped off the face of the map.
It will unleash a barrel of worms.
He pigeonholed us and talked to us.
It's a sticky widget.
I'd like to arm-wave that problem.
Let's run that up the flag.
They've swallowed a bill of goods.
I'm going to tie up the loose edges.
He really pulled the punch line.
Sweeten the kitty.
We don't have a Chinaman's chance in Hell!
It's a hard nut to swallow.
NASA's looking down our throat.
We're still hanging in the lurch.
Mend some bridges.
I can't make hide nor hair of 'em.
We've got a lot more of that coming down the tube.
Footpath of the beam.
Dead to nuts.
Brain trust (for brainstorm).
Like letting off a steam trap.
Happy about the turnout (instead of outcome).
You've hit it on a tee.
Rattle the bushes.
Smug as toast.
Breathing down his throat.
We're a sunk duck.
We grossed over that.
Crimp and save.
Sink like a shot.
Sell them down the tube.
Everything wasn't bread and roses.
We are batting in the dark.
Dragging your heels.
His plate is running over.
We'll just have to call it by ear.
We need to beat the woods.
They run the gambit.
Someday the tables may be reversed!
We're riding off hot and heavy.
We put it on the back end of the burner.*

*We missed the ball.
We foresaw the handwriting on the wall.
Brushy-tailed and fat-eyed.
Catch two birds with one stone.
It's a double-sided coin.
Left out in the lurch.
One fell stroke.
Talking cold turkey.
That goes without standing.
Stopped dead center.
Making money hand over foot.
Bare the linen.
Wrapped in the same axle.
We'll do that when the smoke settles.
He asked the acid question.
Has the heat blown over?
He's out of the going.
We've got to come to grasps with it.
Like a horse with blinkers on.
He is closing ground!
Reasonable aspect of success.
We need to put a bee on his back.
It tends to mitigate against that point.
We are approaching the bottom line where push comes to shove.*

Finally, the most brilliant of all, causing the richest mental image: (Thanks to Clay Krames.)

Like a pack of hyenas jumping on the bandwagon to get their pound of flesh.

i Adiós, queridos! Hasta la vista.