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Why Academics Stink at Writing

By Steven Pinker

Together with wearing earth tones, driving Priuses, and having a foreign policy, the most conspicuous trait of the American professoriate may be the prose style called academese. An editorial cartoon by Tom Toles shows a bearded academic at his desk offering the following explanation of why SAT verbal scores are at an all-time low: "Incomplete implementation of strategized programmatics designated to maximize acquisition of awareness and utilization of communications skills pursuant to standardized review and assessment of languaginal development." In a similar vein, Bill Watterson has the 6-year-old Calvin titling his homework assignment "The Dynamics of Interbeing and Monological Imperatives in Dick and Jane: A Study in Psychic Transrelational Gender Modes," and exclaiming to Hobbes, his tiger companion, "Academia, here I come!"

No honest professor can deny that there's something to the stereotype. When the late Denis Dutton (founder of the *Chronicle*-owned Arts & Letters Daily) ran an annual Bad Writing Contest to celebrate "the most stylistically lamentable passages found in scholarly books and articles," he had no shortage of nominations, and he awarded the prizes to some of academe's leading lights.

But the familiarity of bad academic writing raises a puzzle. Why should a profession that trades in words and dedicates itself to the transmission of knowledge so often turn out prose that is turgid, soggy, wooden, bloated, clumsy, obscure, unpleasant to read, and impossible to understand?

The most popular answer outside the academy is the cynical one: Bad writing is a deliberate choice. Scholars in the softer fields spout obscure verbiage to hide the fact that they have nothing to

say. They dress up the trivial and obvious with the trappings of scientific sophistication, hoping to bamboozle their audiences with highfalutin gobbledygook.

Though no doubt the bamboozlement theory applies to some academics some of the time, in my experience it does not ring true. I know many scholars who have nothing to hide and no need to impress. They do groundbreaking work on important subjects, reason well about clear ideas, and are honest, down-to-earth people. Still, their writing stinks.

The most popular answer inside the academy is the self-serving one: Difficult writing is unavoidable because of the abstractness and complexity of our subject matter. Every human pastime—music, cooking, sports, art—develops an argot to spare its enthusiasts from having to use a long-winded description every time they refer to a familiar concept in one another's company. It would be tedious for a biologist to spell out the meaning of the term *transcription factor* every time she used it, and so we should not expect the tête-à-tête among professionals to be easily understood by amateurs.

But the insider-shorthand theory, too, doesn't fit my experience. I suffer the daily experience of being baffled by articles in my field, my subfield, even my sub-sub-subfield. The methods section of an experimental paper explains, "Participants read assertions whose veracity was either affirmed or denied by the subsequent presentation of an assessment word." After some detective work, I determined that it meant, "Participants read sentences, each followed by the word *true* or *false*." The original academese was not as concise, accurate, or scientific as the plain English translation. So why did my colleague feel compelled to pile up the polysyllables?

A third explanation shifts the blame to entrenched authority. People often tell me that academics have no choice but to write badly because the gatekeepers of journals and university presses insist on ponderous language as proof of one's seriousness. This has not been my experience, and it turns out to be a myth. In

Stylish Academic Writing (Harvard University Press, 2012), Helen Sword masochistically analyzed the literary style in a sample of 500 scholarly articles and found that a healthy minority in every field were written with grace and verve.

Instead of moralistic finger-pointing or evasive blame-shifting, perhaps we should try to understand academese by engaging in what academics do best: analysis and explanation. An insight from literary analysis and an insight from cognitive science go a long way toward explaining why people who devote their lives to the world of ideas are so inept at conveying them.

In a brilliant little book called *Clear and Simple as the Truth*, the literary scholars Francis-Noël Thomas and Mark Turner argue that every style of writing can be understood as a model of the communication scenario that an author simulates in lieu of the real-time give-and-take of a conversation. They distinguish, in particular, romantic, oracular, prophetic, practical, and plain styles, each defined by how the writer imagines himself to be related to the reader, and what the writer is trying to accomplish. (To avoid the awkwardness of strings of *he* or *she*, I borrow a convention from linguistics and will refer to a male generic writer and a female generic reader.) Among those styles is one they single out as an aspiration for writers of expository prose. They call it *classic style*, and they credit its invention to 17th-century French essayists such as Descartes and La Rochefoucauld.

The guiding metaphor of classic style is seeing the world. The writer can see something that the reader has not yet noticed, and he orients the reader so she can see for herself. The purpose of writing is presentation, and its motive is disinterested truth. It succeeds when it aligns language with truth, the proof of success being clarity and simplicity. The truth can be known and is not the same as the language that reveals it; prose is a window onto the world. The writer knows the truth before putting it into words; he is not using the occasion of writing to sort out what he thinks. The writer and the reader are equals: The reader can recognize the truth when she sees it, as long as she is given an unobstructed

view. And the process of directing the reader's gaze takes the form of a conversation.

It's No Joke: Humor Rarely Welcome in Research Write-Ups

Examples of funny papers are few and far between. That's a shame, says one scientist.

Most academic writing, in contrast, is a blend of two styles. The first is practical style, in which the writer's goal is to satisfy a reader's need for a particular kind of information, and the form of the communication falls into a fixed template, such as the five-paragraph student essay or the standardized structure of a scientific article. The second is a style that Thomas and Turner call self-conscious, relativistic, ironic, or postmodern, in which "the writer's chief, if unstated, concern is to escape being convicted of philosophical naïveté about his own enterprise."

Thomas and Turner illustrate the contrast as follows:

> "When we open a cookbook, we completely put aside—and expect the author to put aside—the kind of question that leads to the heart of certain philosophic and religious traditions. Is it possible to talk about cooking? Do eggs really exist? Is food something about which knowledge is possible? Can anyone else ever tell us anything true about cooking? … Classic style similarly puts aside as inappropriate philosophical questions about its enterprise. If it took those questions up, it could never get around to treating its subject, and its purpose is exclusively to treat its subject."

It's easy to see why academics fall into self-conscious style. Their goal is not so much communication as self-presentation—an

overriding defensiveness against any impression that they may be slacker than their peers in hewing to the norms of the guild. Many of the hallmarks of academese are symptoms of this agonizing self-consciousness:

Metadiscourse. The preceding discussion introduced the problem of academese, summarized the principle theories, and suggested a new analysis based on a theory of Turner and Thomas. The rest of this article is organized as follows. The first section consists of a review of the major shortcomings of academic prose. …

Are you having fun? I didn't think so. That tedious paragraph was filled with metadiscourse—verbiage about verbiage. Thoughtless writers think they're doing the reader a favor by guiding her through the text with previews, summaries, and signposts. In reality, metadiscourse is there to help the writer, not the reader, since she has to put more work into understanding the signposts than she saves in seeing what they point to, like directions for a shortcut that take longer to figure out than the time the shortcut would save.

The art of classic prose is to use signposts sparingly, as we do in conversation, and with a minimum of metadiscourse. Instead of the self-referential "This chapter discusses the factors that cause names to rise and fall in popularity," one can pose a question: "What makes a name rise and fall in popularity?" Or one can co-opt the guiding metaphor behind classic style—vision. Instead of "The preceding paragraph demonstrated that parents sometimes give a boy's name to a girl, but never vice versa," one can write, "As we have seen, parents sometimes give a boy's name to a girl, but never vice versa." And since a conversation embraces a writer and reader who are taking in the spectacle together, a classic writer can refer to them with the good old pronoun *we*. Instead of "The previous section analyzed the source of word sounds. This section raises the question of word meanings," he can write, "Now that we have explored the source of word sounds, we arrive at the puzzle of word meanings."

Professional narcissism. Academics live in two universes: the

world of the thing they study (the poetry of Elizabeth Bishop, the development of language in children, the Taiping Rebellion in China) and the world of their profession (getting articles published, going to conferences, keeping up with the trends and gossip). Most of a researcher's waking hours are spent in the second world, and it's easy for him to confuse the two. The result is the typical opening of an academic paper:

> In recent years, an increasing number of psychologists and linguists have turned their attention to the problem of child language acquisition. In this article, recent research on this process will be reviewed.

No offense, but few people are interested in how professors spend their time. Classic style ignores the hired help and looks directly at what they are being paid to study:

> All children acquire the ability to speak a language without explicit lessons. How do they accomplish this feat?

Of course, sometimes the topic of conversation really *is* the activity of researchers, such as an overview intended to introduce graduate students or other insiders to the scholarly literature. But researchers are apt to lose sight of whom they are writing for, and narcissistically describe the obsessions of their federation rather than what the audience wants to know.

Apologizing. Self-conscious writers are also apt to kvetch about how what they're about to do is so terribly difficult and complicated and controversial:

> The problem of language acquisition is extremely complex. It is difficult to give precise definitions of the concept of *language* and the concept of *acquisition* and the concept of *children*. There is much uncertainty about the interpretation of experimental data and a great deal of controversy surrounding the theories. More research needs to be done.

In the classic style, the writer credits the reader with enough intelligence to realize that many concepts aren't easy to define, and that many controversies aren't easy to resolve. She is there to see what the writer will do about it.

Shudder quotes. Academics often use quotation marks to distance themselves from a common idiom, as in "But this is not the 'take-home message,' " or "She is a 'quick study' and has been able to educate herself in virtually any area that interests her." They seem to be saying, "I couldn't think of a more dignified way of putting this, but please don't think I'm a flibbertigibbet who talks this way; I really am a serious scholar."

The problem goes beyond the nose-holding disdain for idiomatic English. In the second example, taken from a letter of recommendation, are we supposed to think that the student is a quick study, or that she is a "quick study"—someone who is alleged to be a quick study but really isn't?

Quotation marks have a number of legitimate uses, such as reproducing someone else's words (She said, "Fiddlesticks!"), mentioning a word as a word rather than using it to convey its meaning (*The New York Times* uses "millenniums," not "millennia"), and signaling that the writer does not accept the meaning of a word as it is being used by others in this context (They executed their sister to preserve the family's "honor"). Squeamishness about one's own choice of words is not among them.

Hedging. Academics mindlessly cushion their prose with wads of fluff that imply they are not willing to stand behind what they say. Those include *almost, apparently, comparatively, fairly, in part, nearly, partially, predominantly, presumably, rather, relatively, seemingly, so to speak, somewhat, sort of, to a certain degree, to some extent,* and the ubiquitous *I would argue.* (Does that mean you would argue for your position if things were different, but are not willing to argue for it now?)

Consider *virtually* in the letter of recommendation excerpted

above. Did the writer really mean to say that there are some areas the student was interested in but didn't bother to educate herself, or perhaps that she tried to educate herself in those areas but lacked the competence to do so? Then there's the scientist who showed me a picture of her 4-year-old daughter and beamed, "We virtually adore her."

Writers use hedges in the vain hope that it will get them off the hook, or at least allow them to plead guilty to a lesser charge, should a critic ever try to prove them wrong. A classic writer, in contrast, counts on the common sense and ordinary charity of his readers, just as in everyday conversation we know when a speaker means *in general* or *all else being equal.* If someone tells you that Liz wants to move out of Seattle because it's a rainy city, you don't interpret him as claiming that it rains there 24 hours a day, seven days a week, just because he didn't qualify his statement with *relatively rainy* or *somewhat rainy*. Any adversary who is intellectually unscrupulous enough to give the least charitable reading to an unhedged statement will find an opening to attack the writer in a thicket of hedged ones anyway.

Sometimes a writer has no choice but to hedge a statement. Better still, the writer can *qualify* the statement—that is, spell out the circumstances in which it does not hold rather than leaving himself an escape hatch or being coy as to whether he really means it. If there is a reasonable chance that readers will misinterpret a statistical tendency as an absolute law, a responsible writer will anticipate the oversight and qualify the generalization accordingly. Pronouncements like "Democracies don't fight wars," "Men are better than women at geometry problems," and "Eating broccoli prevents cancer" do not do justice to the reality that those phenomena consist at most of small differences in the means of two overlapping bell curves. Since there are serious consequences to misinterpreting those statements as absolute laws, a responsible writer should insert a qualifier like *on average* or *all things being equal,* together with *slightly* or *somewhat.* Best of all is to convey the magnitude of the effect and the degree of certainty explicitly, in unhedged

statements such as "During the 20th century, democracies were half as likely to go to war with one another as autocracies were." It's not that good writers never hedge their claims. It's that their hedging is a choice, not a tic.

Metaconcepts and nominalizations. A legal scholar writes, "I have serious doubts that trying to amend the Constitution … would work on an actual level. … On the aspirational level, however, a constitutional amendment strategy may be more valuable." What do the words *level* and *strategy* add to a sentence that means, "I doubt that trying to amend the Constitution would actually succeed, but it may be valuable to aspire to it"? Those vacuous terms refer to metaconcepts: concepts about concepts, such as *approach, assumption, concept, condition, context, framework, issue, level, model, perspective, process, prospect, role, strategy, subject, tendency,* and *variable*.

It's easy to see why metaconcepts tumble so easily from the fingers of academics. Professors really do think about "issues" (they can list them on a page), "levels of analysis" (they can argue about which is most appropriate), and "contexts" (they can use them to figure out why something works in one place but not in another). But after a while those abstractions become containers in which they store and handle all their ideas, and before they know it they can no longer call anything by its name. "Reducing prejudice" becomes a "prejudice-reduction model"; "calling the police" becomes "approaching this subject from a law-enforcement perspective."

English grammar is an enabler of the bad habit of writing in unnecessary abstractions because it includes a dangerous tool for creating abstract terms. A process called nominalization takes a perfectly spry verb and embalms it into a lifeless noun by adding a suffix like *–ance, –ment,* or *–ation*. Instead of *affirming* an idea, you effect its *affirmation*; rather than *postponing* something, you implement a *postponement*. Helen Sword calls them "zombie nouns" because they lumber across the scene without a conscious agent directing their motion. They can turn prose into a night of

the living dead. The phrase "assertions whose veracity was either affirmed or denied by the subsequent presentation of an assessment word," for example, is infested with zombies. So is "prevention of neurogenesis diminished social avoidance" (when we prevented neurogenesis, the mice no longer avoided other mice).

The theory that academese is the opposite of classic style helps explain a paradox of academic writing. Many of the most stylish writers who cross over to a general audience are scientists (together with some philosophers who are fans of science), while the perennial winners of the Bad Writing Contest are professors of English. That's because the ideal of classic prose is congenial to the worldview of the scientist. Contrary to the common misunderstanding in which Einstein proved that everything is relative and Heisenberg proved that observers always affect what they observe, most scientists believe that there are objective truths about the world, and that they can be discovered by a disinterested observer.

By the same token, this guiding image of classic prose could not be farther from the worldview of relativist academic ideologies such as postmodernism, poststructuralism, and literary Marxism, which took over many humanities departments in the 1970s. Many of the winning entries in the Dutton contest (such as Judith Butler's "The move from a structuralist account in which capital is understood to structure social relations in relatively homologous ways to a view of hegemony in which power relations are subject to repetition, convergence, and rearticulation brought the question of temporality into the thinking of structure ….") consist almost entirely of metaconcepts.

For all its directness, classic style remains a pretense, an imposture, a stance. Even scientists, with their commitment to seeing the world as it is, are a *bit* postmodern. They recognize that it's hard to know the truth, that the world doesn't just reveal itself to us, that we understand the world through our theories and constructs, which are not pictures but abstract propositions, and

that our ways of understanding the world must constantly be scrutinized for hidden biases. It's just that good writers don't flaunt that anxiety in every passage they write; they artfully conceal it for clarity's sake.

The other major contributor to academese is a cognitive blind spot called the Curse of Knowledge: a difficulty in imagining what it is like for someone else not to know something that you know. The term comes from economics, but the general inability to set aside something that you know but someone else does not know is such a pervasive affliction of the human mind that psychologists keep discovering related versions of it and giving it new names: egocentrism, hindsight bias, false consensus, illusory transparency, mind-blindness, failure to mentalize, and lack of a theory of mind. In a textbook demonstration, a 3-year-old who sees a toy being hidden while a second child is out of the room assumes that the other child will look for it in its actual location rather than where she last saw it. Children mostly outgrow the inability to separate their own knowledge from someone else's, but not entirely. Even adults slightly tilt their guess about where a person will look for a hidden object in the direction of where they themselves know the object to be. And they mistakenly assume that their private knowledge and skills—the words and facts they know, the puzzles they can solve, the gadgets they can operate—are second nature to everyone else, too.

The curse of knowledge is a major reason that good scholars write bad prose. It simply doesn't occur to them that their readers don't know what they know—that those readers haven't mastered the patois or can't divine the missing steps that seem too obvious to mention or have no way to visualize an event that to the writer is as clear as day. And so they don't bother to explain the jargon or spell out the logic or supply the necessary detail.

Obviously, scholars cannot avoid technical terms altogether. But a surprising amount of jargon can simply be banished, and no one will be the worse for it. A scientist who replaces *murine model* with *rats and mice* will use up no more space on the page and be no less

scientific. Philosophers are every bit as rigorous when they put away Latin expressions like *ceteris paribus, inter alia*, and *simpliciter,* and write in English instead: *other things being equal*, *among other things*, and *in and of itself*.

Abbreviations are tempting to thoughtless writers because they can save a few keystrokes every time they have to use the term. The writers forget that the few seconds they add to their own lives come at the cost of many minutes stolen from their readers. I stare at a table of numbers whose columns are labeled DA DN SA SN, and have to riffle back and scan for the explanation: Dissimilar Affirmative, Dissimilar Negative, Similar Affirmative, Similar Negative. Each abbreviation is surrounded by inches of white space. What possible reason could there have been for the author not to spell them out?

A considerate writer will also cultivate the habit of adding a few words of explanation to common technical terms, as in "*Arabidopsis*, a flowering mustard plant," rather than the bare "*Arabidopsis*" (which I've seen in many science papers). It's not just an act of magnanimity; a writer who explains technical terms can multiply his readership a thousandfold at the cost of a handful of characters, the literary equivalent of picking up hundred-dollar bills on the sidewalk. Readers will also thank a writer for the copious use of *for example, as in*, and *such as* because an explanation without an example is little better than no explanation at all.

And when technical terms are unavoidable, why not choose ones that are easy for readers to understand? Ironically, the field of linguistics is among the worst offenders, with dozens of mystifying technical terms: themes that have nothing to do with themes; *PRO* and *pro*, which are pronounced the same way but refer to different things; *stage-level* and *individual-level predicates*, which are just unintuitive ways of saying "temporary" and "permanent"; and *Principles A, B*, and *C*, which could just as easily have been called the Reflexive Effect, the Pronoun Effect, and the Noun Effect.

But it's not just opaque technical terms that bog down academese.

Take this sentence from a journal that publishes brief review articles in cognitive science for a wide readership:

> The slow and integrative nature of conscious perception is confirmed behaviorally by observations such as the "rabbit illusion" and its variants, where the way in which a stimulus is ultimately perceived is influenced by poststimulus events arising several hundreds of milliseconds after the original stimulus.

The authors write as if everyone knows what "the rabbit illusion" is, but I've been in this business for nearly 40 years and had never heard of it. Nor does their explanation enlighten. How are we supposed to visualize "a stimulus," "poststimulus events," and "the way in which a stimulus is ultimately perceived"? And what does any of that have to do with rabbits?

So I did a bit of digging and uncovered the Cutaneous Rabbit Illusion, in which if you close your eyes and someone taps you a few times on the wrist, then on the elbow, and then on the shoulder, it feels like a string of taps running up the length of your arm, like a hopping rabbit. OK, now I get it—a person's conscious experience of where the early taps fell depends on the location of the later taps. But why didn't the authors just say that, which would have taken no more words than stimulus-this and poststimulus-that?

Scholars lose their moorings in the land of the concrete because of two effects of expertise that have been documented by cognitive psychology. One is called chunking. To work around the limitations of short-term memory, the mind can package ideas into bigger and bigger units, which the psychologist George Miller dubbed "chunks." As we read and learn, we master a vast number of abstractions, and each becomes a mental unit that we can bring to mind in an instant and share with others by uttering its name. An adult mind that is brimming with chunks is a powerful engine of reason, but it comes at a cost: a failure to communicate with other minds that have not mastered the same chunks.

The amount of abstraction a writer can get away with depends on the expertise of his readership. But divining the chunks that have been mastered by a typical reader requires a gift of clairvoyance with which few of us are blessed. When we are apprentices in our chosen specialty, we join a clique in which, it seems to us, everyone else seems to know so much! And they talk among themselves as if their knowledge were conventional wisdom to every educated person. As we settle into the clique, it becomes our universe. We fail to appreciate that it is a tiny bubble in a multiverse of cliques. When we make first contact with the aliens in other universes and jabber at them in our local code, they cannot understand us without a sci-fi universal translator.

A failure to realize that my chunks may not be the same as your chunks can explain why we baffle our readers with so much shorthand, jargon, and alphabet soup. But it's not the only way we baffle them. Sometimes wording is maddeningly opaque without being composed of technical terminology from a private clique. Even among cognitive scientists, for example, "poststimulus event" is not a standard way to refer to a tap on the arm.

The second way in which expertise can make our thoughts harder to share is that as we become familiar with something, we think about it more in terms of the use we put it to and less in terms of what it looks like and what it is made of. This transition is called functional fixity. In the textbook experiment, people are given a candle, a book of matches, and a box of thumbtacks, and are asked to attach the candle to the wall so that the wax won't drip onto the floor. The solution is to dump the thumbtacks out of the box, tack the box to the wall, and stick the candle onto the box. Most people never figure this out because they think of the box as a container for the tacks rather than as a physical object in its own right. The blind spot is called functional fixity because people get fixated on an object's function and forget its physical makeup.

Now, if you combine functional fixity with chunking, and stir in the curse that hides each one from our awareness, you get an explanation of why specialists use so much idiosyncratic

terminology, together with abstractions, metaconcepts, and zombie nouns. They are not trying to bamboozle their readers; it's just the way they think. The specialists are no longer thinking—and thus no longer writing—about tangible objects, and instead are referring to them by the role those objects play in their daily travails. A psychologist calls the labels *true* and *false* "assessment words" because that's why he put them there—so that the participants in the experiment could assess whether it applied to the preceding sentence. Unfortunately, he left it up to us to figure out what an "assessment word" is.

In the same way, a tap on the wrist became a "stimulus," and a tap on the elbow became a "poststimulus event," because the writers cared about the fact that one event came after the other and no longer cared that the events were taps on the arm. But we readers care, because otherwise we have no idea what really took place. A commitment to the concrete does more than just ease communication; it can lead to better reasoning. A reader who knows what the Cutaneous Rabbit Illusion consists of is in a position to evaluate whether it really does imply that conscious experience is spread over time or can be explained in some other way.

The curse of knowledge, in combination with chunking and functional fixity, helps make sense of the paradox that classic style is difficult to master. What could be so hard about pretending to open your eyes and hold up your end of a conversation? The reason it's harder than it sounds is that if you are enough of an expert in a topic to have something to say about it, you have probably come to think about it in abstract chunks and functional labels that are now second nature to you but are still unfamiliar to your readers—and you are the last one to realize it.

The final explanation of why academics write so badly comes not from literary analysis or cognitive science but from classical economics and Skinnerian psychology: There are few incentives for writing well.

When Calvin explained to Hobbes, "With a little practice, writing

can be an intimidating and impenetrable fog," he got it backward. Fog comes easily to writers; it's the clarity that requires practice. The naïve realism and breezy conversation in classic style are deceptive, an artifice constructed through effort and skill. Exorcising the curse of knowledge is no easier. It requires more than just honing one's empathy for the generic reader. Since our powers of telepathy are limited, it also requires showing a draft to a sample of real readers and seeing if they can follow it, together with showing it to *yourself* after enough time has passed that it's no longer familiar and putting it through another draft (or two or three or four). And there is the toolbox of writerly tricks that have to be acquired one by one: a repertoire of handy idioms and tropes, the deft use of coherence connectors such as *nonetheless* and *moreover*, an ability to fix convoluted syntax and confusing garden paths, and much else.

You don't have to swallow the rational-actor model of human behavior to see that professionals may not bother with this costly self-improvement if their profession doesn't reward it. And by and large, academe does not. Few graduate programs teach writing. Few academic journals stipulate clarity among their criteria for acceptance, and few reviewers and editors enforce it. While no academic would confess to shoddy methodology or slapdash reading, many are blasé about their incompetence at writing.

Enough already. Our indifference to how we share the fruits of our intellectual labors is a betrayal of our calling to enhance the spread of knowledge. In writing badly, we are wasting each other's time, sowing confusion and error, and turning our profession into a laughingstock.

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