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Future of Publishing

On whimsy, jokes, and beauty: can scientific writing be enjoyed?

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Abstract

While scientists are often exhorted to write better, it isn't entirely obvious what "better" means. It's uncontroversial that good scientific writing is clear, with the reader's understanding as effortless as possible. Unsettled, and largely undiscussed, is the question of whether our goal of clarity precludes us from making our writing enjoyable by incorporating touches of whimsy, humanity, humour, and beauty. I offer examples of scientific writing that offers pleasure, drawing from ecology and evolution and from other natural sciences, and I argue that enjoyable writing can help recruit readers to a paper and retain them as they read. I document resistance to this idea in the scientific community, and consider the objections (well grounded and not) that may lie behind this resistance. I close by recommending that we include touches of whimsy and beauty in our own writing, and also that we work to encourage such touches in the writing of others.

Key words: writing, humour, beauty.

It's a widely held opinion that the scientific literature is replete with, even typified by, bad writing. There is much truth to this idea, despite the fact that as scientists we spend an astonishingly large fraction of our working time writing—and despite the fact that nothing is more important to our careers, and to the progress of science, than the products of that writing. Calls to make our writing "better" are frequent, and come from all quarters: publishers, editors, bloggers, journalists, rhetoricians, instructors, and others. But what might "better" mean? In this essay I explore the possibility that part of "better" might mean "more enjoyable", and that there is a place in scientific writing for whimsy, for jokes, and even for beauty.

Clarity vs. art in the scientific literature

If scientific writers aren't sure how to write better, it isn't for lack of advice. Dozens of guidebooks discuss form, style, and goals in scientific writing (e.g., Montgomery 2003, Davis 2005, Day and Gastel 2006, Katz 2006, Matthews and Matthews 2007, Rogers 2007, Harmon and Gross 2010, Hofmann 2010, Pechenik 2010, Greene 2013, Heard *unpubl.*). There are plenty of disagreements among competing guidebooks, but one point on which they are virtually unanimous is that the most important attribute of good scientific writing is clarity. This is neither surprising nor controversial: a scientist's career depends on his or her publications being read and cited, and yet with the ever-growing deluge of published scientific literature, potential readers have a near-endless array of alternatives to a paper that's difficult to read. It's also consistent with a long history of advice about rhetoric (not just in the sciences). For example, in 1851 Nathaniel Hawthorne wrote that "The greatest possible merit of style is...to make the words absolutely disappear into the thought" (Turner 1980), and much later William Strunk argued that the typical reader was "a man floundering in a swamp" and that "it [is] the duty of anyone trying to write English to drain this swamp quickly and get his man up on dry ground" (Strunk and White 1972). But Stephen King gave the argument for clarity its purest expression (King 2000): his chapter "What writing is" opens with the declaration: "Telepathy, of course". What King means, of course, is that writing should be so crystal clear that to the reader, it feels like direct and effortless ("telepathic") communication from the writer's brain to his or her own.

Hawthorne's (and others') prescription raises an interesting question. If our words disappear leaving only the thought, they have done their job—but have we squandered an opportunity? Must the pursuit of clarity

leave prose that's functional but colourless, or might readers understand the content of a paper while also enjoying the words expressing that content? Could such enjoyment even enhance communication between writer and reader? In other words, is there a place for art—for whimsy, jokes, and beauty—in scientific writing?

These questions are conspicuously absent from writing guidebooks (but see limited discussion in Harmon and Gross 2007, Sword 2012). They are not, however, new questions. The writing form we now call the scientific paper originated in the mid-1600s, with the founding of the Royal Society of London and its journal, *Philosophical Transactions of the Royal Society*. Two key figures in the era's transformation of science were Robert Boyle, the physicist who more than anyone else invented the methods-and-results scientific paper (Pérez-Ramos 1996), and the clergyman Thomas Sprat, who helped found the Society and wrote an influential account of its early activities (Sprat 1667). Sprat and Boyle disagreed about the ideal writing style for scientists. Sprat railed against anything more than the plainest language, with particular disdain for figures of speech like metaphors, irony, or allegory (collectively, "tropes"):

> *Who can behold without indignation how many mists and uncertainties these specious Tropes and Figures have brought to our knowledge? How many rewards...have been still snatched away by the easy vanity of fine speaking?*(Sprat 1667:112, spelling and punctuation modernized).

This position would fit easily into most modern writing guides. Boyle, however, thought that Sprat wanted to swing the pendulum too far:

> *To affect needless rhetorical ornaments in setting down an experiment...were little less improper than…to paint the eyeglasses of a telescope...in which even the most delightful colours cannot so much please the eye as they would hinder the sight...And yet I approve not that dull and insipid way of writing, which is practiced by many...for though a philosopher need not be solicitous that his style should delight his reader with his floridness, yet I think he may very well be allowed to take a care that it disgust not his reader by its flatness...Though it were foolish to colour...the glasses of telescopes, yet to gild...the tubes of them may render them most acceptable to the users* (Boyle 1661:11-12, spelling and punctuation modernized).

Three hundred and fifty years later, Sprat and Boyle's argument remains unresolved and largely undiscussed. There is no doubt that Boyle is right in the first half of his argument: in scientific writing, art is a bad idea if it interferes with clear and easy understanding (metaphorically, painting the telescope's eyeglass). In literature, beautifully enigmatic writing can be a success (as in the intentionally mysterious symbolism of Herman Melville's (1851) great white whale, Moby-Dick). In science, beautifully enigmatic writing is a failure. The second half of Boyle's argument, though, is intriguing. Can the writer of a scientific paper gild the telescope's tube and thus provide enjoyment without compromising clarity? And might doing so make scientific writing more effective by recruiting and retaining readers? I argue that the answer to both questions is 'yes'.

Sightings (1): Playfulness in the scientific literature

The scientific literature's reputation for being turgid and tedious is not entirely undeserved. Examples of sparkling or amusing scientific writing are unusual enough that finding one is like sighting a glow-throated hummingbird or a Salt Creek tiger beetle: beautiful, but rare, tiny, and glimpsed in passing. In scientific writing, pleasure for the reader tends to come from small things: playful touches, deft turns of phrase, whimsical allusions, and sparkling metaphors that ornament the text but don't dominate it. I begin with playfulness, while acknowledging that the line between playfulness and beauty is not a sharp one.

Perhaps the most famous example of scientific whimsy (and literary allusion) is physicist Murray Gell-Mann's use of the name "quark" for a hypothesized new class of elementary particle (Gell-Mann 1964). Gell-Mann (1964, 1995) attributed the name to a typically inscrutable line in James Joyce's *Finnegans Wake*: "Three quarks for Muster Mark!" (Joyce 1939). Because three quarks make up each proton and neutron, the name fits. Similarly playful terminology can be found across disciplines. In systematics, a suitably-shaped mite has been named *Darthvaderum* (Figure 1; Hunt 1996), a sponge-shaped mushroom *Spongiforma squarepantsii* (Desjardin et al. 2011), and a trap-door spider *Aname aragog* (Harvey et al. 2012; after the giant spider in *Harry Potter and the Chamber of Secrets*; Rowling 1998). (The clam originally named *Abra cadabra* (Eames and Wildkins 1957) is now, sadly, *Theora cadabra*, but the snail *Ba humbugi* (Solem 1982) survives.) In chemistry, a class of very large cyclic organic molecules has been dubbed the "dogcollaranes" (Craig and Paddon-Row 1987), and aromatic carbon spheres are "buckminsterfullerenes" (Kroto et al. 1985; after their resemblance to Buckminster Fuller's geodesic domes). Not to be left out, *Drosophila* geneticists have named genes *saxophone, scarface, skittles, slow as*

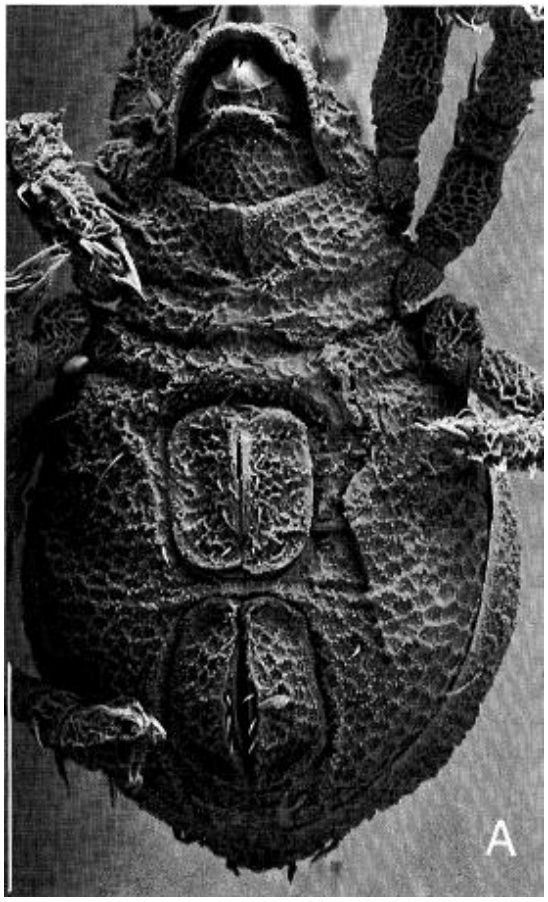

Figure 1. The orbatid mite *Darthvaderum greensladeae* Hunt. The name arises from the shape of the gnathosoma (the collective term for mite mouthparts, or roughly, everything in the figure above the insertion of the first legs). Figure reproduced from Hunt 1996, his Figure 13A; scale bar 200 um.

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molasses, *smaug*, *sneaky*, and *spotted dick* (to pull just a few examples from the S's).

Playful touches in scientific writing are not restricted to terminology. Onnela et al. (2012), for example, discuss the performance of two algorithms for measuring the structure of networks but ignore an obvious third algorithm, reasoning that the first two are much more widely used—"and life is short." Coyne and Orr (1998) discuss the "snowballing" accumulation of Dobzhansky-Muller incompatibilities during speciation, citing an otherwise unrelated letter to *Nature* (Menotti-Raymond et al. 1997) involving a cat named Snowball. Wilson and Calvin (1955) and Hurlbert (1990), among others, have included decorative elements or visual jokes in graphic elements (Figure 2), following on a tradition well known from medieval maps (Van Duzer 2013). Even author lists are not entirely safe: Hans Bethe's name appears on Alpher et al. (1948) only to make the author list Alpher, Bethe, Gamow (a play on α, β, γ that is apparently funniest if you're a physicist), while M. V. Van existed at all only to make Vincent et al.'s (1996) author list Vincent, Van, Goh (Vincent and Brown 2009). (Authorship jokes are rare, though, probably because fractional authorship has consequences for databasing and for careers.)

Playfulness is probably most common in titles and acknowledgements. Playful titles are an attempt to catch a reader's attention. Consider, for instance, Coleman and Lee's (1989) *"Escape from the menace of the giant wormholes"* (astrophysical, not oligochaetous, ones) or Rissman et al.'s (1999) "*Sex with knockout models: behavioural studies of estrogen receptor alpha*". Who wouldn't read on? In acknowledgements, playfulness is probably more of a relief valve for writers, who can write things there that wouldn't survive the editorial process elsewhere. Van Valen (1973), for instance, in his paper introducing the Red Queen hypothesis, thanked a granting agency "for regularly rejecting my (honest) grant applications for work on real organisms…thus forcing me into theoretical work".

The use of metaphor and simile in scientific writing is partly playful, but well-chosen metaphors play a communicative function as well. Some of these are now so familiar that we don't remember how they glistened upon first use ("tree of life", "big bang", "electron cloud"). The Red Queen Hypothesis (Van Valen 1973) is named with a metaphor that's also a literary allusion (to the Red Queen in *Through the Looking-Glass, and What Alice Found There*; Carroll 1871). This allusion isn't just memorable—it also fits the science so well that it's hard to think of a better way to summarize the concept of continued adaptation to maintain fitness in changing environments. Finally, Rockman (2012) made particularly effective use of extended metaphor in assessing the search for quantitative trait nucleotides (QTNs) in light of the likely frequency and evolutionary roles of large- and small-effect alleles:

> *In January 1848, James Marshall found gold flakes in the millrace of John Sutter's saw mill. Within months...the rush was on. Thousands left home, rounding the Cape, crossing the Isthmus, or joining the wagon trains headed west. Soon the easy pickings were gone, and consortia of miners banded together to blast more flakes from the hills. Extraction technologies proliferated: first rockers and long toms, then gravel dredges, and finally hydraulic mining, which washed whole mountains through giant sluices to recover dense gold flakes from the riffles.*
>
> *Modern day QTN prospecting is the Sierra Nevada of the 1850s.The shiny (Mendelian) nuggets are rapidly being collected, and ever larger teams of researchers with ever more*

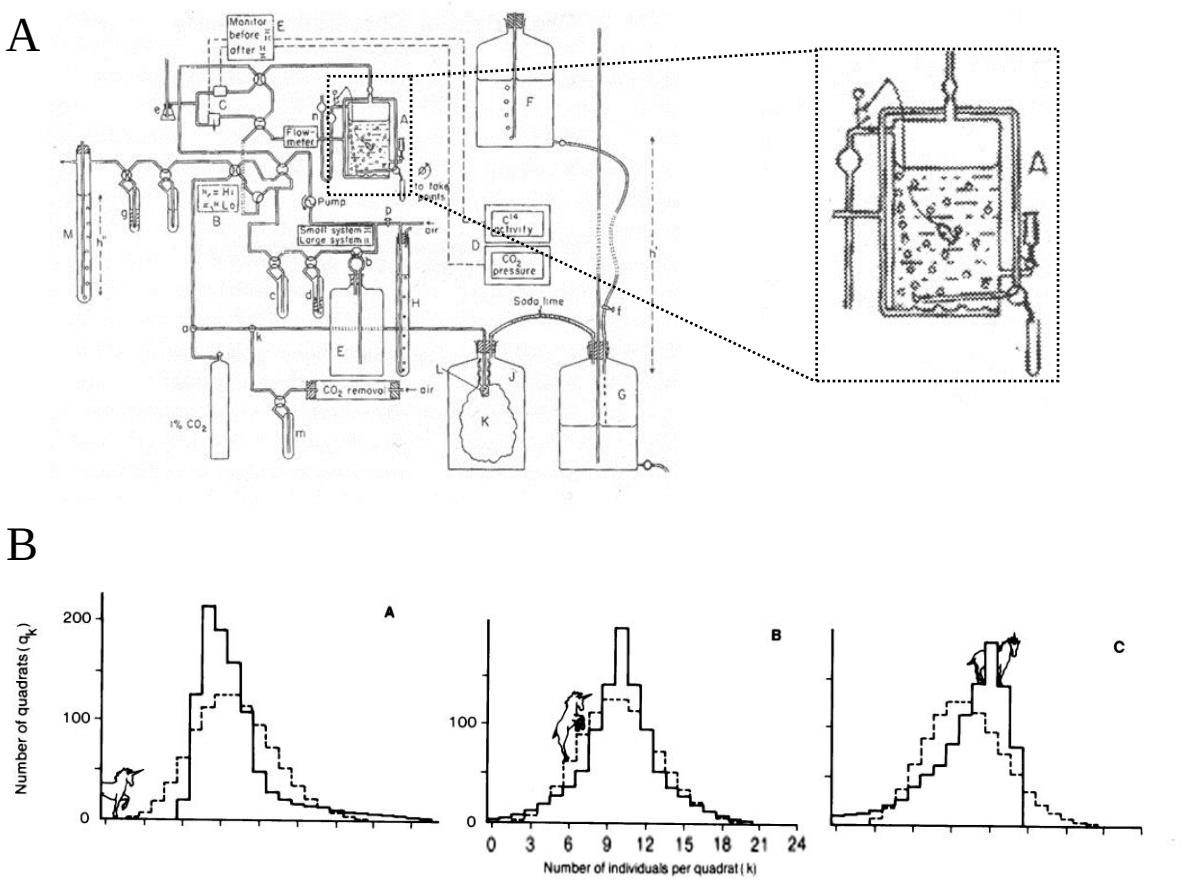

Figure 2. Visual playfulness in scientific papers. **(A)** An unexpected feature of Wilson and Calvin's (1955) apparatus for studying fixation of carbon during photosynthesis (their Figure 1). **(B)**. Decorated abundance histograms, from "*Spatial distribution of the montane unicorn*" (Hurlbert 1990, his Figure 1).

> *powerful technologies are now probing whole genomes to find their quarry. But visible flakes of placer gold represent a small fraction of the global gold reserve; most gold is in microscopic particles concealed in low-grade ore. If the stuff of evolution is often alleles of microscopic effect, large-effect nuggets can tell us little about the material basis for evolution.* (Rockman 2012)

You may think this passage goes beyond playfulness to achieve beauty (and I would agree, although a precise statement of the distinction is a matter for philosophers). No frequency histogram could make Rockman's point as vividly as the gold metaphor: large-effect alleles are easy to find, and exciting when you find one, but they might not contribute much to overall genetic variation.

Sightings (2): Beauty

In beginning with examples of witty titles and playful terminology, I might be accused of going after the (relatively) easy pickings. Do scientific papers include truly beautiful prose? They do, although admittedly, this kind of sighting is rarer. Note that here I'm considering beauty of the writing itself; a reader might also enjoy elegance of experimental design or beauty of a theorem or its proof, but that's another topic (see, e.g., Fagerström 1987, Aigner and Ziegler 2010).

That one can write with grace and beauty *about* science is in no doubt. A long tradition of popular science writing has included luminaries ranging from Henry David Thoreau to Martin Gardner and Carl Sagan, and there are prizes and anthologies that

celebrate the very best (e.g. Dawkins 2008). I'll offer just one example: a passage from the essayist Lewis Thomas, here writing about the evolutionary role of mutation (Thomas 1979):

> *The capacity to blunder slightly is the real marvel of DNA. Without this special attribute, we would still be anaerobic bacteria and there would be no music. Viewed individually, one by one, each of the mutations that have brought us along represents a random, totally spontaneous accident, but it is no accident at all that mutations occur; the molecule of DNA was ordained from the beginning to make small mistakes. If we had been doing it, we would have found some way to correct this, and evolution would have been stopped in its tracks...To err is human, we say, but we don't like the idea very much, and it is harder still to accept the idea that erring is biological as well... But there it is: we are here by the purest chance, and by mistake at that. Somewhere along the line, nucleotides were edged apart to let new ones in; maybe viruses moved in, carrying along bits of other, foreign genomes; radiation from the sun or from outer space caused tiny cracks in the molecule, and humanity was conceived.*

But writing about science for laypeople and writing science for the primary literature are two different things. Can one report new science with the kind of beauty Thomas and others manage in lay essays? Certainly it was possible in times gone by, when the literature was less crowded and we had the luxury of expansive writing in long papers and monographs (even today, such outlets are somewhat more permissive, but they constitute an increasingly tiny sliver of the literature). Here, famously, is Darwin concluding the *Origin of Species* (Darwin 1859):

> *It is interesting to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us...There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.*

Can one pull off anything like this today, given the modern deluge of literature that strains both journal space and readers' attention? Not at length, I suspect; but it remains possible to gild the telescope's tube with small touches of beautiful writing. Consider, for example, the papers of Vladimir Nabokov. Nabokov was a literary giant who displayed "mastery of the aesthetic potential of prose" in writing *Lolita* and his other novels (Morris 2010); but he was also a systematist of the butterfly family Lycaenidae. The bulk of Nabokov's scientific writing consists of species descriptions and taxonomic revisions, so it's no shock that Nabokov's papers aren't lyrical in every sentence from Abstract to Conclusion. His writing, instead, is sprinkled with morsels of art and humour, and reading them is an adventure that yields little sparkling surprises like these:

> [The genus *Cyclargus* has a sagum with] *two convex (ventrad) lobes...connected at the zone with the alula, and below the zone with the points of the furca, converging in front...of the adeagus in the manner of a stiffly bulging short waistcoat, too ample as it were for the body it encloses* (Nabokov 1952),

and

> [The genus *Lycaeides*'] *cradle is a lost country of plenty beyond the Arctic Circle…; its nurseries are the mountains of Central Asia, the Alps, and the Rockies. Seldom more than two and never more than three species are known to occur in a given geographical region, and so far as records go, not more than two species have ever been seen frequenting the same puddle or the same flowery bank* (Nabokov 1944).

Perhaps it's easy to for a distinguished novelist to write lyrically about butterflies (even about their genitalia). Maybe so; but even quantum mechanics can be written about with beauty. Mermin (1995) discusses a startling result that seems to let an observer measure a set of properties that shouldn't be simultaneously measurable. Mermin calls the observer "Alice" and the measurement the "VAA trick" (after the authors who originally proposed it). In summing up the reason the VAA trick is possible, Mermin writes

> *There are no physical grounds for insisting that* [Alice] *assign the same value to an observable for each mutually commuting trio it belongs to—a requirement that would indeed trivially make her job impossible. The manner in which the nine-observable BKS theorem brings Alice to grief is more subtle than that. It is buried*

> *deep inside the mathematics that underlies the construction that makes it possible, when it* is *possible, to do the VAA trick.*

You don't have to understand this passage to appreciate the lovely writing.

In ecology and evolution, theoretical papers have a particular reputation for dryness. But here is Hamilton (1971) setting up a simulation model of herding as an anti-predator defense:

> *Imagine a circular lily pond. Imagine that the pond shelters a colony of frogs and a water-snake…Shortly before the snake is due to wake up all the frogs climb out onto the rim of the pond…*[The snake] *rears its head out of the water and surveys the disconsolate line sitting on the rim…and snatches the nearest one. Now suppose the frogs are given opportunity to move about on the rim before the snake appears, and suppose that initially they are dispersed in some rather random way. Knowing that the snake is about to appear, will all the frogs be content with their initial positions? No…and one can imagine a confused toing-and-froing in which [desirable positions] are as elusive as the croquet hoops in Alice's game in Wonderland."*

Two things unite these examples. First, they achieve touches of beauty without compromise to clarity. Second, that beauty seems to echo the joy the writers felt in making their discoveries about nature—and perhaps, the joy a reader might feel in sharing those discoveries.

Can art enhance function?

It's clear that playfulness, humour, and beauty are possible in scientific writing, but do they have a functional role to play? Art might actually interfere with function if it impedes clarity (in Boyle's metaphor, painting the telescope's eyeglass); or it might be harmless but still add nothing to communication. But it's also possible that art could enhance function, as Boyle suggested, by increasing the probability that a paper is published, read, and cited. Readers may be more likely to read a paper that promises enjoyment, may be more likely to finish such a paper and remember (and cite) it later, and may be more likely to recommend an enjoyable paper to colleagues. (Of course, this can cut both ways, with the risk that some readers may be put off by excessive playfulness or stylistic flourishes). Humour in particular has an additional and longstanding rhetorical role in criticism, where it can help recruit readers to critical thinking about widely-held beliefs (e.g., Gould and Lewontin 1979, Warton and Hui 2011, and your favourite political satire).

Virtually no formal analysis is available, though, to assess the impact of playfulness, humour, or beauty on the function of scientific writing. Two anecdotes suggest that this impact can be positive. First, let's revisit the naming of quarks by Gell-Mann (1964). These particles were hypothesized independently by Zweig (1964), in a paper published a couple of weeks before Gell-Mann's, but Zweig called them "aces". Quark, not ace, stuck; and Gell-Mann's prediction, not Zweig's, is widely remembered. There may be several reasons for this, but the pleasure in Gell-Mann's naming was surely a factor. In our own field, consider Hurlbert (1984): a long and challenging paper about pseudoreplication. Pseudoreplication is an important issue for ecologists, but it isn't exciting; in fact, 25 pages on pseudoreplication could easily have been the statistical equivalent of watching very complicated paint dry. And yet Hurlbert's paper is still widely read and has been cited over 4,400 times—nine times more often than any other paper on the subject. I suspect that this success owes a lot to Hurlbert's discussion of the distinction between *demonic intrusion* (roughly, confounding) and *non-demonic intrusion* (roughly, error variance) in experiments. I'll confess that the first time I read the paper, I stuck with it only because of this arresting terminology; and, years later I re-read it because the phrase "demonic intrusion" was nudging at my memory, demanding to be tracked down. Hurlbert's whimsy drew me through his paper, drew me back to it, and has done the same for many other readers over the years.

Against these anecdotes is a single study that attempted to measure the association between citation rates and humour in the titles of papers in two psychology journals (Sagi and Yechiam 2008). A panel of 4 graduate students rated each of 1009 titles for humour, with citation data gathered independently. Sagi and Yechiam's result is widely cited as a cautionary tale, because they reported that the most amusing titles were cited less. However, this effect showed up only in a *t*-test comparing citation rates between the most amusing 7% and the remaining 93% of titles; a correlational analysis using all the data found no effect at all (Spearman's $r = 0.03$, NS). So, while the study is valuable because it demonstrates that one can apply formal analysis to this kind of question, it doesn't leave us with much of an answer. Furthermore, no study to my knowledge has extended this kind of analysis beyond Sagi and Yechiam's two focal journals, beyond the field of psychology, or to other aspects of style in writing beyond title humour. In particular, I am aware of no attempt to measure the correlation between beauty and citation. A definitive answer to my question about art and function will thus have to await future, and

ambitious, work in the field of science studies. In the interim, ask yourself this question: would you rather read passages like those I've cited, or writing that's clear and functional, but nothing more?

Pushback

There is plenty of resistance to the notion that whimsy, jokes, and beauty can have a place in our scientific literature. The *Journal of Organic Chemistry* once published a paper written almost entirely in blank verse (Bunnett and Kearley 1971), but in a footnote, its editors made it quite clear that they did not envision doing so again. Seringhaus et al. (2008) and others have criticized "silly" gene names. One noted journal in ecology and evolution routinely discourages humorous titles, citing Sagi and Yechiam (2008) despite the weakness of that analysis. Queller's (1995) colourful critique of Gould and Lewontin's (1979) "Spandrels of San Marco" suggested that their extensive use of metaphor and literary allusion is counterproductive, asking dismissively "what do we really get by surrounding science with a Joycean mix of one-liners and double entendres?" and complaining that "colourful use of language can mislead as well as inform." Gross et al. (2002:167–168) offer perhaps the most unambiguous advice against beauty in writing, giving some examples of metaphors and "personal style" in scientific publications and then arguing that these are "examples of 'bad' scientific prose... if they were far more pervasive they would be counterproductive in communicating science effectively."

I ran into pushback myself with a manuscript about the population genetics of an endangered plant (Heard et al. 2009). The plant seems to self-pollinate despite having many florets lacking stamens, probably (we thought) via mechanical transfer of pollen among florets as plants are shaken in the wind. So I wrote "there is, however, considerable evidence (Houle 1988) for pollen transfer among florets...by wind or shaking (Hall et al. 1957)." An attentive reader would discover that the Hall reference was to Jerry Lee Lewis's song *Whole Lotta Shakin' Goin' On*. A reviewer noticed this, and groused "Although I appreciated the levity from the reference… I think it is not appropriate for a scientific publication". The joke doesn't appear in the published version.

My intended joke wasn't beautiful, and you could argue that it wasn't very funny either (and I'd be hard pressed to defend myself). But that wasn't the reviewer's objection. Instead, (s)he argued that it wasn't "appropriate" for the scientific literature. What might that mean, and what lies behind the more general pushback I've described? There are two possibilities. First, there is Boyle's objection: the belief that a particular joke, metaphor, or bit of beautiful writing is obscuring meaning (painting the telescope's eyeglass). A particular worry seems to be that readers with different cultural backgrounds (those too young to know *Whole Lotta Shakin' Goin' On*, for instance) won't get a joke or understand a metaphor, and that this would impair communication. This objection to *particular* attempts at pleasure in scientific writing could presumeably be overcome if the metaphor was very accessible or the joke just wouldn't be noticed by those who didn't get it. The second possibility is an objection that scientific writing isn't supposed to be funny or beautiful *in general*. As Sagi and Yechiam (2008) put it, perhaps it's that "traditionally, scientific publication is considered a serious matter, and humor seems antithetical to it." I think that was the position of the reviewer who nixed my Jerry Lee Lewis joke, and there isn't much doubt that many scientists think this way—and that they bring this belief to their work as reviewers and editors. Such objections to playfulness and to beauty are clearly not universal, but they aren't rare either. This is unfortunate.

A prescription

If you write papers that are crystal clear and thus effortless to read, you'll have achieved the primary goal of scientific writing and your work will be among the best of our literature. But if you want to reach for even more, if you agree with me that we can also offer our readers some pleasure in reading, what can you do? To begin, you can try to write with small touches of whimsy, humanity, humour, and beauty—without, of course, compromising clarity; and even knowing that sometimes, reviewers will make you take them out. I am not suggesting writing in which art shares the stage equally with content (as can be true in the lay literature). Rather, the goal that's within our reach is clear, functional writing punctuated with occasional nuggets of playfulness or glints of beauty—to extend Boyle's metaphor, not a telescope of solid gold but one lightly gilded.

You can also work to encourage pleasure in what your colleagues write, in two complementary ways. First, when you review manuscripts, you can suppress the reflex telling you to question any touches of whimsy, humour, or beauty that you find; you can even (gently) suggest some be put in. Second, you can announce your admiration of writing that has given you pleasure. Announce your admiration to the writers who crafted the passage, to editors who might be considering its fate, and to students or colleagues who might read it. If we choose to, we can change our culture to deliver, and value, pleasure along with function in our writing.

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