

What is the Pinot?

Douglas Hofstadter
September, 2015



In September of 2003, I received the following provocative email from a reader named Brad Pugh:

Dear Dr. Hofstadter,

I am familiar with some of your interests, and you've probably seen this before, but I thought it was amusing, so I'm passing it on:

Accodrign to rsceearh dneo at Cmabrigde Uinervtisy, it deosn't mtttaer in waht oredr the ltteers in a wrod are, the obny iprmoatnt tihng is taht the frist and lsat ltrtees be at the rghit pclae. The rset can be a tatol mses and you can sitll raed it wouthit a porbelm. Tihis is bcuseae the huamn mnid deos not raed ervey lleter by istlef, but the wrod as a wlohe.

Petry amzanig, huh?

Brad Pugh

Immediately and virtually effortlessly, I was able to read the paragraph that Mr. Pugh had enjoyed and had forwarded to me. Deciphered, it went as follows:

According to research done at Cambridge University, it doesn't matter in what order the letters in a word are, the only important thing is that the first and last letters be at the right place. The rest can be a total mess and you can still read it without a problem. This is because the human mind does not read every letter by itself, but the word as a whole.

So, was this an amazing discovery, as Mr. Pugh had exclaimed at the end of his message? Well, the fact that I myself had read this paragraph so rapidly and so easily might seem to demonstrate the truth of the claim very convincingly, but despite that, I intuitively felt that the claim was highly implausible. In fact, it struck me as glib and silly and profoundly wrong. But I suspected that most people, after

reading the clever paragraph effortlessly, just as I had, would fall for its claim lock, stock, and barrel, and yet I felt certain that communication in language requires a lot more precision than the claim would suggest. In short, I felt outraged by this “research”, and something deep inside me wanted to combat the nonsensical idea that this very catchy paragraph was propagating.

I surmised that the words in the passage had been carefully selected so as to permit rapid unscrambling. Note that most of them are very short, so to unscramble them is almost trivial — in fact, 32 out of the 70 words are not scrambled at all. Also, many of the words are just barely scrambled — thus, “Cmabrigde” merely involves two swaps of adjacent letters (“am \Rightarrow ma” and “dg” \Rightarrow “gd”) — and “Uinervtisy” is almost as simple. I also noted that the passage was such that once you got started reading it, none of the words that came later were highly unpredictable. In short, it contained many hardly-scrambled words and was chock-full of redundancy, making each word easy to guess.

Because I was so skeptical of the claim (and so annoyed by it), I decided to do my best to show Mr. Pugh it was wrong, by writing a similar passage (encoded in exactly the same manner) that would be virtually unreadable by anyone without devoting a great deal of time to unscrambling all but the very short words. If I could do this, it would go a long ways toward undermining the claim and supporting my intuitive belief. So below you’ll find the email I sent back to Mr. Pugh the same day. I hope you enjoy “reading” it.

Daer Mr. Pguh,

Tknahs for yuor fliderny magesse, but utotrealfunny it was tilberry ducfilfit to dipcheer. I specust taht it got gelbrad by smoe africatiil iglennictele pgroarm showermee in the irentent. Placilcraty edobeyrvy is vrenballue to scuh isoduinis mithocaninas teshe dyas. Wulod it tulobre you to rensed the msgease to me, helfloupny in an ucsmelbrand visoren? I arpetcapie yuor isetrent in my wingrits.

Cladiloray,
Dalogus Hattsdofer.

I wonder how easily you were able to read it. I suspect this paragraph was not nearly as easy for you to read as the paragraph Mr. Pugh had sent to me. Of course, my paragraph was also constructed with great care, but in exactly the opposite manner — namely, it was constructed so as to contain very few short words and to seriously scramble the long ones, as well as to be quite unpredictable

in its content. In fact, reading it again these many years later (2015, thus twelve years later), I found that I could only slog through it very slowly, and I had a rough time figuring out several of the words. Indeed, I admit that I'm still stumped by "isoduinis"! The fact that I *still* can't read that word, although it certainly frustrates me, also brings me genuine delight, because it strongly reinforces my claim.

So... What's the Pinot of all this? The Pinot is that language is not nearly so trivial as the supposed "rsceearh dneo at Cmabrigde Uinervtisy" would suggest. Or to put it another way, the point is that the human mind is *not* so capable of compensating for huge amounts of disorder and mistakes and randomness in written passages as the humorous paragraph sent along by Mr. Pugh would suggest. The human mind *depends* at all times on such things as good grammar, correct word order, and correct spelling of words. There is a very good reason that we try (or at least *should* try) to spell words correctly and, more generally, to write as precisely as we possibly can. Effective, unambiguous communication *relies* on correctness at many levels simultaneously. Yes, to be sure, we can easily ignore some mistakes or garblings some of the time, but the fact is that errors (even simple, small ones) can soon throw us pretty far off, and a dense plethora of errors in a passage will almost always render it essentially opaque if not totally meaningless. *That* is the Pinot. He'ers to nank-foe poshylgocy! Bomtots up!

