If You Can Raed Tihs, You Msut Be Raelly Smrat

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By Courtney Crowder

FOX NEWS

Chances are you've seen this in your inbox:

"Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteers be at the rghit pclae. The rset can be a toatl mses and you can sitll raed it wouthit porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe."

Chances are you also understand it. It purports that the order of the letters inside a given word doesn't matter, as long as the first and last letters of each word are in the right place.

You can read the words because the human mind reads words as a whole, and not letter-by-letter.

Well, that's what it says. But while it's entertaining and ego-boosting (that is, if you can read it), it ain't exactly so.

The e-mail, while partially correct in its overall hypohsetis — um, hypothesis — is "very irresponsible in several important ways," says Denis Pelli, professor of psychology and neural science at New York University.

First of all — oops — there was never a study done at Cambridge University. And therein lies a tale.

The e-mail was originally sent around without mentioning Cambridge; it got added after the Times of London interviewed a Cambridge neuropsychologist for comment.

Matt Davis, a senior research scientist at Cambridge University's Cognition and Brain Sciences Unit, spent some time tracking down the origin of this letter-transposition story.

He found that it comes from a letter written in 1999 by Graham Rawlinson, a specialist in child development and educational psychology, to New Scientist magazine in response to an article written about the effects of reversing short chucks of speech.

In his letter, Rawlinson — whom FoxNews.com could not track down — wrote that the article "reminds me of my Ph.D. at Nottingham University, which showed that randomizing letters in the middle of words had little or no effect on the ability of skilled readers to understand the text."

Rawlinson later contacted Davis, who has put up a Web site to address the issues behind the often forwarded e-mail, to explain his comment and thesis research.

"Clearly, the first and last letters are not the only thing that you use when reading text," he wrote. "If this were the case, how would you tell the difference between pairs of words like 'salt' and 'slat'."

Also to be noted, as one commenter on Davis's Web site, Clive Tooth, posted, is that one permutation can result in many different words, and, while you can take into consideration the sentence's context, one still can't be sure about the author's true intention of word choice.

For example, the transposed letters of 'ponits' could spell out any of five different words – 'pitons', 'points', 'pintos', 'potins', and 'pinots.'

The circulating e-mail itself is also misleading, Rawlinson said, because it seems written to enhance the desired effect to further prove its point.

Rawlinson points out that words with two or three letters don't change at all, making them totally understandable.

In the e-mail, almost half (31 out of 69) the words are correctly spelled. The words that are unchanged are also often "function words," — the, you, me, but, and — which help keep the grammar of the sentences basically unchanged.

The e-mail also transposes adjacent letters, which makes the words easier to read. For example, "thing" is written as "tihng," not "tnihg"; "problem" is written as "porbelm," not "pbleorm."

Lastly, Rawlinson says, the phrasing used in the e-mail itself is quite predictable. The sentences are simple and, given the unchanged words, one can deduce their meaning easily.

Another expert in this particular field, Keith Rayner, professor of psychology and director of the Rayner Eyetracking Lab at University of California San Diego, said, "There is some truth to the e-mail in that people can read sentences in which the letters are jumbled. But, there is always a cost (i.e., they never read them as quickly and efficiently as they read normal text)."

Rayner and his colleagues did an experiment in which they asked college students at the University of Durham to read 80 sentences with transposed letters. The letter transposition in the words resulted in lower reading speeds for most participants.

The students read 255 words per minute when the sentences were normal, and 227 words per minute when the letters were transposed, a 12 percent decrease in overall reading speed.

"While it may seem that it is easy to read text with transposed letters," Rayner wrote, "there is always a cost involved in reading such text in comparison to normal text."

Davis, who seems sick of the e-mail, especially because of its added use of the Cambridge name, said, "The moral of the story (at least where Cmabrdige is concerned), is that untruths printed are very hard to suppress."

But he does see a silver lining in the fact that a simple forwarded e-mail has brought light to an issue near and dear to his research interests.

"What's undoubtedly true is that scientific studies on jumbled letters and letter-order in reading has increased considerably since the e-mail started circulating," he said.

Now that you know the entire story, you'll be well armed with the "real" facts when this "fact" comes up during cocktail hour.

Just make sure to answer intelligently.

And remmeber to aviod excesisve drniking.

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