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Letter order in words an interesting linguistic topic



Paul Warren
WATCH YOUR LANGUAGE

I RECENTLY re-encountered this passage, circulating by email: According to research 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 letter be at the right place. The rest can be a total mess and you can still read it without problem. This is because the human mind does not read every letter by itself, but the word as a whole.

According to Cambridge researchers, this passage is misleading, not least because no research proving this claim has been done there. Also, some arguments in the passage are simply wrong. Take the claim that "it doesn't matter in what order the letters in a word are", as long as "the first and last letter" are in the right place. It is simple to demonstrate that this is not true – the following sentences, constructed from random samples in *The Dominion Post*, are not equally easy to understand, even though the words have been reordered following the general principle of keeping the first and last letters in their original positions.

The executive said the development would require building consent.

The government is being warned it risks losing respect among its.

The difference is that the words in the first sentence have had their letters reordered at a more local level, within

each half of the word, while in the second the reordering is more dramatic. So the order of the letters does matter.

Indeed, reordering the letters of short words, while keeping the first and last in place, results in little difficulty. Two-letter and three-letter words (31 of the 68 words in the passage) will not change; in four-letter words just the middle two letters are swapped (13 more words). Local reordering often remains unnoticed during proof-reading – did you spot "jsut" for "just"? Since most short words contribute to the grammatical structure of sentences, the fact they are not changed much will help the reader. If the reordering of longer words also remains local, as in the first of my example sentences and in most of the long words in the passage, then this will also reduce the impact of reordering. Another suggested reason why keeping the letters in the correct half of the word could be less disruptive is the claim that longer words may be processed in two halves, with the retinal image split between the two hemispheres of the brain.

It is also true that none of the reorderings in the passage produced a different word. Changing "carp" to "crap" would be potentially more disruptive than changing "word" to "wrod". Further, changes like "toatl" for "total" keep the sound of the word (think about how you



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might pronounce “toatl”), and there is good research evidence that even during silent reading we are influenced by the likely sound of the words we see. In addition, there is a lot of predictability in the passage as a whole – some words (“wrod”, “raed”) occur more than once, and the second time you see the same scrambled word it is likely to be easier. The topic of the passage quickly becomes obvious, and readers regularly use contextual knowledge to help overcome problems recognising words.

The disrupted text above also claims that we do not “read every letter by itself, but the word as a whole”. There is some truth in this – skilled readers certainly do not read every letter in a word. MiXIng thE CaSEs in words disrupts reading, in a way that relates to overall word shape,

rather than to the recognition of each letter. The importance of overall word shape is also reflected in the fact that lower case words are responded to more quickly than upper case words in speeded recognition tasks. Lower-case words have more distinctive shapes, with letters that have ascenders (as in “b”, “d”, etc) and descenders (as in “p”, “g”, etc).

So though there is an element of truth behind some of the arguments made in the passage, local reordering has made reading it easier than it might have been, and even so, few would pretend they read it totally “wouthit porbelm”.

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■ Send your questions about language to words@dompost.co.nz