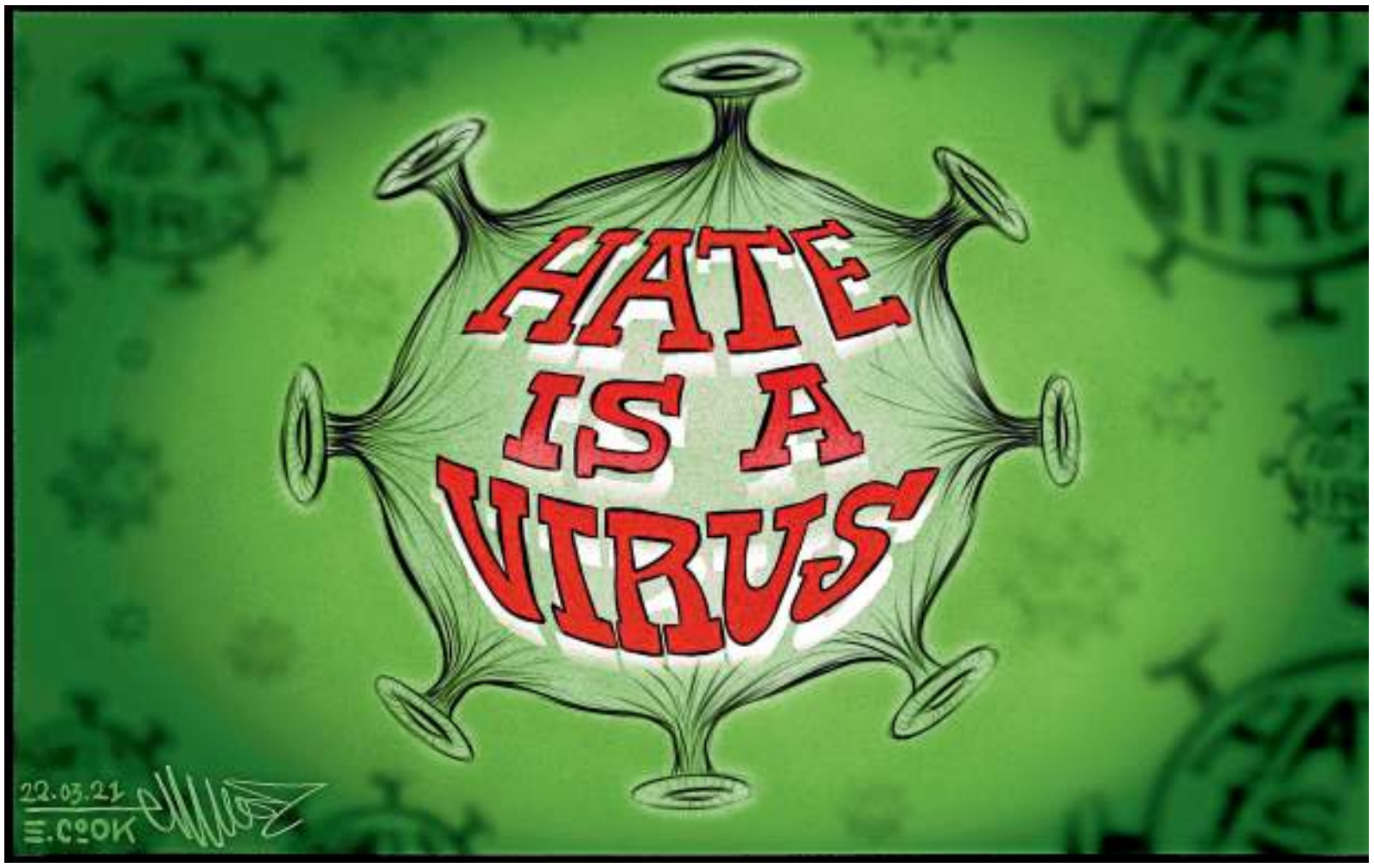


## LANGUAGE MATTERS

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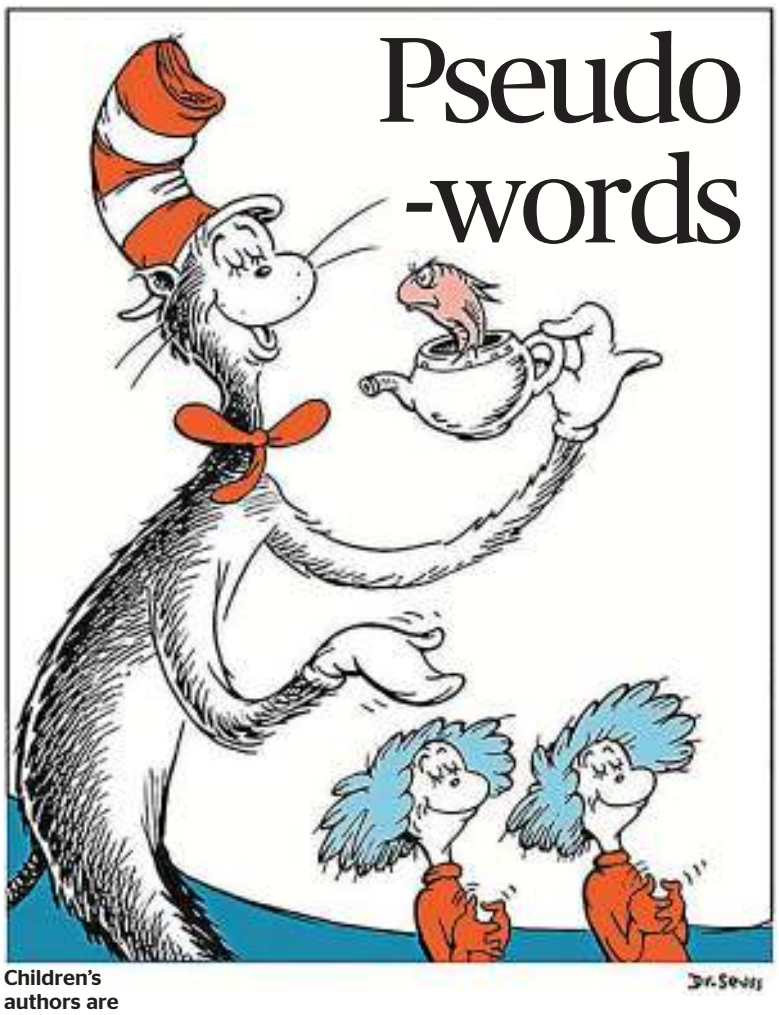
# Pseudo-words




**Children's authors are known to make up interesting words, like Dr Seuss' *miff-muffered moof*.**

Kids love to play around with language as they learn it. They delight in testing out new words too. For instance, my kids talk about the *worser things in life*, knowing full well that *worser* is not really a word in English.

This kind of play is part of the learning process. Children's authors are also known to make up interesting words, like Roald Dahl's *frothbungling*, describing something ridiculous, or Dr Seuss' *miff-muffered moof*, which refers to the material from which the Once-ler makes his clothes in *The Lorax*.

Quite apart from eliciting a good laugh and the opportunity for an in-joke among children, non-words can be very useful for adults, too. Psychologists sometimes use them to test how individuals process and store language knowledge. Language teachers also use them, in language proficiency tests.

For practical reasons, language vocabulary tests may involve asking learners if they know a word, and simply trusting them to tell the truth. In order to ensure that learners do not optimistically exaggerate their vocabulary knowledge, non-words which look like the real thing are snuck into the lists. Every time such a non-word is selected as known, points are deducted from the overall score.

In fact, so useful are these non-words that researchers have a jargon term reserved just for them: *pseudowords*. Given how pseudowords are used, we really want to make them appear very much like the real deal.

It would be useless to include *sdkjhakfhkajdf* as a word in a list testing English learners, because anyone who knows anything about English will immediately smell a rat. But coming up with good pseudowords is no mean feat. Not everyone has children lying around the place actively engaged in wordplay all day long.

And for those who don't, a faster way to get pseudowords is to program a computer to generate them. Computers can do this by splitting existing words into parts and then recombining these in new ways.

A few years ago, one of my former PhD students, Jemma König, came up with a neat algorithm for generating pseudowords. Sometimes this worked really well and we got gems like *novelines*, *wordinarily*, *unimagine* and *apartmentalize*, leading us to wonder why English does not have these as real words; they seemed to have such potential! But sometimes, the process did not work quite as well: *istye*, *thwiped* or *prirr*.

The trouble is that, while they can generate pseudowords, computers cannot (currently) rate how good their made-up, fake words are.

Jemma and I sifted through the output to come up with ways of rating the pseudowords' ability to pass as English words. This wasn't easy either. As speakers of English, we could immediately pick out the good pseudowords from the not-so-good ones, but in order to figure out how our minds were doing this, we had to reverse engineer the process, and things got tricky.

All this goes to show just how remarkable our minds are in their ability to capture language patterns implicitly, and instantly recognise items which do not match these. We know so much about language and comparatively still so little about how we know this, or what this exact knowledge is.

As it turns out, w*ordinarily* speaking, far from being *frothbungling*, pseudowords may have more to teach us, in their *simplicit* way, than we have ever previously *unimagined*.

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Email opinion@stuff.co.nz with your language query. Not all will be answered.

THE AGE

# Access disputes but still an amazing feat

**Views from around the world. These opinions are not necessarily shared by *Stuff* newspapers.**

**Viewpoint**

The desperate pursuit of the life-saving coronavirus inoculations has led to a flurry of vaccine diplomacy. Russia and China have committed to providing hundreds of millions of doses to a range of developing nations in exchange for stronger ties. US President Joe Biden has attempted to counter this by contributing billions of dollars to the Covax fund to help developing nations obtain enough vaccine.

But that has not stopped some nations playing hardball. The European Union has been in fierce dispute with vaccine manufacturer AstraZeneca after the company was able to deliver only a third of the 90 million doses it promised during the first three months of the year. That dispute triggered the decision by the EU to ban a shipment of 250,000 AstraZeneca doses to Australia this month.

The global uncertainty has added to growing concerns that the local vaccination rollout is behind schedule. From today, about 1000 general practices are meant to start delivering vaccinations, alongside 100 Commonwealth-run, GP-led clinics. But along with hiccups in the booking system there has been uncertainly about the number of doses each clinic will get its hands on.

Despite the local mishaps and global jockeying for doses, we should not lose sight that it is only just over a year since China publicly released the first genomic sequencing of the virus, the essential building block in developing a vaccine. Since then not only have several vaccines been approved, but close to 400m doses administered. Whatever the glitches along the way, that has been a remarkable effort.