

Worn keys

A few days ago, the university sent around a short note about claiming expenses for home working (for paper, and similar things that we would normally just collect from stores). A member of my group responded immediately to ask whether it would be OK to order a new keyboard, because four of the keys on his were becoming worn out. Not detecting the set-up, I said it would be fine, and I asked idly "Which four keys?"

" W, T, F and ? ", came the reply, " due to sending too many reaction tweets and e-mails about articles on alleged COVID origins and cures".

It has indeed been a strange time for scientific communication and debate. Most conspicuous has been a lot of high-profiled theorizing about SARS-CoV-2 being a synthetic super-virus produced in a lab. There is nothing about the genome of the virus to suggest that this is the case; it has had a peculiar evolution, apparently from a bat original via an unknown host to humans, but nothing has the look of deliberate genetic engineering and to be honest I would be surprised if anyone was clever enough to think of the very peculiar 'hacks' the virus has acquired.

Then there has been a vast rumpus about the antimalarial drug chloroquine or its derivatives. In an emergency, the idea of trying a drug like this was a good one: it interferes in a general way with cellular pathway along which SARS-CoV-2 hitches a ride, and in simple experiments in culture it does inhibit the virus. So, even though the drug is dangerous to the heart, it was tried in very early clinical trials in China. It was not conspicuously successful, but the trials were too small to rule out any beneficial effect and it passed as a component to larger trials. Then the cause was taken up by a French enthusiast, whose pronouncements were spelt the beginning of serious wear for my colleague's keys, as he grappled with trying to find the rigorous hard data behind the hype. Then an even more prominent figure across the Atlantic, not renowned for understanding scientific subtleties, espoused the drug very publicly in a way that would have been funny, were it not for the deaths of people convinced they should consume anything with that molecule in it, including fish-tank cleaner.

The story then got increasingly bizarre, with a large-scale paper being published in *The Lancet* using alleged clinical patient data to refute the idea that chloroquine was useful. This paper (see Links) gained a lot of publicity first because of its result, which caused the WHO to halt larger scale trials of chloroquine or derivatives. Then it gained even more publicity because *The Lancet*

published an '*expression of concern*' about the validity of the patient data, then even more because the original authors of the paper retracted it because they could not verify the provenance of the patient data that had come to them via a company called Surgisphere. Just when the world really needs excellent science, it gets nonsense like this. This was not the first time Surgisphere had turned up in the COVID-19 literature - earlier, they were behind a claim that the antiparasitic drug Ivermectin was effective against the disease. The paper has since been retracted, but not before it had been responsible for more keyboard wear. According to a *Wikipedia* article on Surgisphere (see [Links](#)), the UK newspaper *The Guardian* investigated the company and found that it worked from rented offices and had 6 employees, one of whom was an 'adult' model and the other of whom was a science fiction writer. Possibly they all were, after a fashion....

Hard on the heels of that retraction was the retraction by the New England Journal of Medicine of a paper showing that ACE inhibitors do not increase risk from COVID-19 (note - the fact that this paper was retracted does not mean that the opposite of its claim is true - it just means it was bad science and nothing can be concluded from it). Again, the reason for the retraction was that it turned out that the original data could not be checked.

For those who care about science, that these high-profile papers could appear in high-profile journals and have major effects on decision-making before withdrawal is worrying. I am not, though, pointing fingers at all of their authors; the requirement for anonymity in patient data does make it much harder for users of the data to check that it is real (much harder than it would be with animal data, for example, in which Rat 106 will have records that can be checked by anyone).

Some relatively light relief - though not for Chris' keyboard - was provided during the same period by other alleged cures (though I realize that 'light relief' would not be a good description if anyone took unnecessary risks in the mistaken belief that they were protected from the virus by taking these remedies). One was a mixture of hydrogen peroxide, vitamin C, some proteins, and potassium thiocyanate, sold under the trade-name Trinity. The dosing regime included prayer and bee pollen (whatever that is). Of course, there has been no published evidence to support the efficacy of this product, sold in the USA for hundreds of dollars. Colloidal silver, which does have some antibacterial properties, has also been sold as an oral cure for COVID-19, again with no trace of evidence and plenty of reason to assume harm.

For us in the UK, the greatest keyboard-destroying moment was probably when people started to attack mobile 'phone (cellphone/ Handy) masts believed by them to use the 5G protocol, on the peculiar belief that microwaves of the 5G spectrum (which actually occupies a number of frequency bands from 0.7 to 27 GHz in the UK) were either the cause of COVID-19, independent of any virus, or were damaging the immune system's ability to fight COVID-19. Many masts being targeted were not in fact 5G at all (5G infrastructure tends to be small and local) and, in a particularly horrible irony, radio masts used to coordinate ambulances were attacked. Talking of irony, I assume that the misinformation about 5G and COVID was read by people using wifi or 3-4G, all of which use microwaves as well. Probably, the W, T and F keys on their own devices are still as good as new.

Looking at my own keyboard, the only key that seems to show a lot of wear is the one with the £ sign. It must be all the grant applications...

Jamie Davies, East Lothian, June 2020

Links

- The retracted Lancet paper - [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31180-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31180-6/fulltext)
- The retraction notice - [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31324-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31324-6/fulltext)
- Wikipedia article on Surgisphere - <https://en.wikipedia.org/wiki/Surgisphere> (accessed 2020-06-16).
- The retracted NEJM paper - <https://www.nejm.org/doi/full/10.1056/NEJMoa2007621>