

## Coronavirus in context

The present pandemic of coronavirus (Covid-19) is real. There can be little sensible doubt that a new species of virus is spreading through the human population. The raw facts are these; once Covid-19 was first identified in Britain at the end of January, there was what is called 'a lag-phase' in which numbers of infected people rose by single figures. After mid-March, numbers began to increase exponentially, each day's new infections being larger than the previous one. Globally, on 19<sup>th</sup> March 220,000 people had tested positive for the virus and 9,000 (4.0%) of them had died. Figures for UK were: 2,600 and 103 (also 4.0%).

News of Covid-19 caused chaos; stock exchanges throughout the world crashed, countries shut their borders, industries closed down, air travel practically ceased, mass gatherings of any sort, including major sporting fixtures cancelled, schools, colleges and other institutions closed, old people confined to their homes, and a host of other measures imposed or advised by governments in social disruption unseen in Europe since World War 2. Fear stalks the land - we stockpile provisions, accept the economic and social chaos described above and mentally go into the trenches.

### Change of behaviour

Our vast change of behaviour was not caused directly by the biological virus but in response to what we were told by other people – mostly the communications media. We judge the importance and accuracy of what we hear by the number of people who say they too believe it. 'Who say' because many retain private doubts which they prefer to keep to themselves lest they offend public opinion. Doubt is, in my view, one of the most important human virtues but that is another longer story. Immediacy is another indication of truth, and modern communications are so efficient that, if they are broadcasting live, we can hear about events from all over the world as they happen. And we trust the reporters to get the information they tell us right, and we generally behave as if they do. Occasionally they get it wrong, are duped or, very rarely, are just plain evil.

### The nature of the virus

Whatever we believe to be accurate, we try to find out more. There are many known viruses that have a halo (Latin: *corona*) of bristles towards one end. They are collectively called *coronaviruses* and were first discovered in domestic animals in 1937 and in humans in the 1960s. A new coronavirus was identified in 2019, and called 'Covid-19' to signal the year. It is a human parasite of the nose, throat and windpipe, and its symptoms are very like those of the common cold and mild flu. Diseases caused by viruses are virtually untreatable because the virus is a parasite that lives inside the cells of a larger organism – the host. It takes over genetic control of the host's cells and uses their raw materials for its own reproduction. All doctors and nurses can do is to alleviate the symptoms and allow the body of a patient to make its own immune response.

### Previous pandemics

There have been four other major flu-like pandemics during the past century: Spanish Flu 1918-1919, 50 million died; Asian Flu 1957-1958, 2 million died; Hong Kong Flu 1968-1969, one million died; Swine Flu 2009-2010, 500,000 died. The SARS (Severe Acute Respiratory Syndrome) was not pandemic but an epidemic in southern China 2002-2003, 774 died. SARS has its place in history by being the stock from which the present coronavirus

pandemic evolved.

The diminution of numbers of deaths in these pandemics: 50, 2, 1, ½ million probably reflects a combination of medical care and changing behaviour to reduce the rate of spread of the responsible virus. Certainly, current recommendations or orders by governments seem reasonable, if draconian.

**What happens next?**

All previous epidemic or pandemic diseases have eventually died out for one or both of two main reasons; the parasite becomes less harmful through natural selection, and/or the host becomes immune by its own responses. Also in all cases, our population quickly resumed its apparently inexorable increase. Perhaps we can turn the present Covid-19 crisis and the responses of governments to it to the longer-term advantage of everyone by treating it as a rehearsal for the far greater tragedy that is bearing down upon us in the form of the human population tsunami.

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