We Should Have Known...

One of the most distressing elements of the Covid-19 pandemic is the scale it has assumed, which was not ineluctable. This was brought home to me in late March, when a colleague sent me a reprint of a journal article published in the October 2007 issue of *Clinical Microbiology Reviews*. The subject was the SARS epidemic that erupted in China in 2003. My colleague, Dr. Gothamie Weerakoon, is a botanist conducting research for the Museum of Natural History in London who was drawn to the piece for professional reasons.

"I was looking for any related research that would explain and predict pandemic conditions," Dr. Weerakoon wrote me. Like so many in Europe, she is working now from home, and her museum is closed. She finds the confinement a bit wearisome, but her interest in botany and the natural world is unflagging. "Although we have not paid close attention to this"—coronaviruses—"we had evidence that was scientifically proven that predicted that something like this might happen. I wanted to understand what would happen, its causes and likely outcomes, how the balance would be interrupted, and so forth."

Normally I would not be reading the research of four infectious disease specialists at the University of Hong Kong. But my interest was stimulated by the disaster that has overtaken the Western World. Even a resident of suburban Chicago like myself finds the topic arresting. The scientists in Hong Kong studied the 2003-04 outbreak of SARS, a deadly infection caused by a coronavirus that belongs to a family of 36 strains known as *Coronaviridae*. It seems that the success of China's industrialization has played an almost predictable role in furthering the danger of these viruses. "The rapid economic growth in southern China," the researchers write, "has led to an increasing demand for animal proteins including those from game food animals. . . Large numbers and varieties of these wild game mammals in overcrowded cages and the lack of biosecurity measure in wet markets"—venues where live animals are sold—"allowed the jumping of this novel virus from animals to humans."

The researchers speculated that the virus causing SARS originated in horseshoe bats, a species prevalent in that part of Asia. These flying mammals later transmitted the infection to palm civets and raccoon dogs. Further, known strains of *Coronaviridae* are susceptible to recombination, which "can lead to new genotypes and outbreaks." The researchers added this prescient warning: "The presence of a large reservoir of SARS-CoV-like viruses in horseshoe bats, together with the culture of eating exotic mammals in southern China, *is a time bomb* [emphasis mine]." Remember, this analysis was published in 2007.

Scholars at the Hamburg University of Applied Sciences echoed this alarm in a report from October 2009. They reviewed data on the eruption of SARS in the South China province of Guangdong in November 2002. China saw the greatest number of cases, but the infection spread to 29 other countries, most notably Singapore, Vietnam, Hong Kong, Taiwan, and even Canada. The researchers in Hamburg noted at the end of their monograph that "The risk of infectious diseases recurring and spreading is high, especially in today's interconnected world, and requires national and international public health authorities to take rapid and decisive steps towards containment."

So there are ample grounds for assuming that governments around the world, and especially those in Asia, Europe and North America, should have foreseen the possibility of a pandemic. This is obviously not what happened. On April 1, 2020, by which point the virus was well entrenched around the world, *The Economist* of London interviewed Dr. Larry Brilliant, the internationally renowned epidemiologist credited with helping to eradicate smallpox in India. Brilliant was asked by the interviewer if governments had responded effectively after the Covid-19 virus took hold in Wuhan and Hubei Province in December. He answered this way: "I think my government [in America] fumbled, almost unforgivably, the way they mangled the distribution of test kits; in the way that our leadership pretended that the outbreak could be brought down from five to zero and [that] it would not be a problem for a while. And it continued to underplay how important it was, as a 'hoax.'" But Brilliant goes on to fault other governments, including China's and the U.K.'s, for not responding expeditiously to the news.

Stephen Lee Myers of the *New York Times* described, in a March 29 article, the breakdown of the elaborate reporting system that China developed after the SARS scare of 2003. The system involved a computerized notification program alerting authorities in Beijing to any contagious outbreak that could be "smothered" before it would spread. The system failed when hospital officials in Wuhan deferred to "local health officials" who chose to suppress the news. By the time the contagion was too pervasive to disregard, it was too late to keep it confined to the province of Hubei, of which Wuhan is the capital. A team of reporters for the *Times* amplified on the subject of official incompetence, this time in the U.S., in a piece that appeared on the paper's website on April 11. The National Security Council predicted in early January that the coronavirus would spread to this country, a report that President Trump ignored. He also disregarded a now-famous January 29 memo prepared by his economics adviser, Peter Navarro, that described the cataclysmic dangers, both medical and economic, the virus represented. Other elements of the health bureaucracy sounded alarms, but the president decided they reflected the goals of the "deep state" opposed to his administration and chose to discount them. The rest is history—unfinished history, at that.

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