

STANDING UP FOR SCIENCE: A VOICE OF REASON: SOUTH AFRICA'S CHIEF COVID-19 ADVISER AT THE FRONTLINES OF THE PANDEMIC

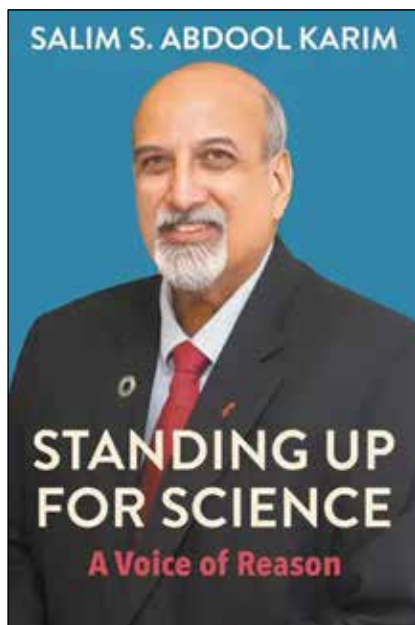
by SALIM S. ABDOOL KARIM

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OUR first authoritative assessment of the Covid-19 pandemic, autobiography, and a stout defence of the logic and rationality of scientific method: Salim (Slim) Abdool Karim blends all three effectively in this book, although some of his opinions are debatable. But as Karim points out, contestation is the bedrock of good science, which is dialectical and part of a process.

He grew up in Chatsworth with a fascination for problem solving inspired by Sir Isaac Newton; and was a student at the University of Natal's Medical School, where the eminent paediatrician Jerry Coovadia was a political and academic mentor. An interest in viruses led to studies in epidemiology with an investigation into a hepatitis B outbreak among Mlazi children. There were to be studies of measles, polio and influenza, but significantly he was involved in the very early stages of HIV/AIDS research. It was in this field that he became eminent, earning the enmity of denialists such as Minister of Health Manto Tshabalala-Msimang of garlic and beetroot fame, plus other stupidities of an alternative reality. Along the way Karim became a public health expert, increasingly involved in the bigger picture. He notes that some of the successful AIDS-related research took up to two decades to complete.

He admits that he was slow to wake up to the significance of, and even flip-pant about, Covid-19. But his son was among the first South African cases and a colleague one of the first fatali-



ties; and he mobilised the resources of the Centre for the AIDS Programme of Research in South Africa (CAPRISA) to cope with the looming pandemic. At St Augustine's Hospital in Durban, he was involved in basic research to trace the chain of transmission that posed a severe threat to frontline medical staff.

As head of the Department of Health ministerial advisory committee (MAC) Karim was faced with a paucity of scientific data and a need to learn on the job; although he and many colleagues were veterans of the HIV/AIDS epidemic, an invaluable training ground. MAC and its related responsibilities became all-consuming. Karim's Covid-19 presentation went through six editions before his famous Easter weekend 2020

address to the nation on all three news channels, which made him into a media star and helped to educate and reassure many through commonsense and sound knowledge. Overnight, he became a national asset, although he points out that media exposure and scientific enquiry are not always consonant.

Karim sticks to official wisdom that the harsh nine-week lockdown from 26 March 2020 flattened the infection curve enabling the health services to prepare for a winter surge of cases, although he does concede that this cannot be proven beyond doubt. Indeed, there is cause to question whether a country with such a youthful demographic profile should have been unnerved by the experience of a place like Italy. The consequences for the informal economy were disastrous. And there is also the question whether draconian lockdown regulations were, or could be, obeyed in high-density townships. So, his orthodox view is contestable. But he is surely correct in arguing that containment as adopted by New Zealand was not an option for South Africa. Nor was a herd immunity strategy given what was subsequently learned about long Covid.

It was soon established that Covid-19 transmission was primarily person-to-person, especially in crowded and poorly ventilated spaces. The issue of asymptomatic infection was a particular concern. As Karim points out, this made the pandemic as much a social upheaval as a disease; in his memorable description a perfect storm of biology and behaviour. What he does not address is that this was complicated by the Stalinist approach of the South African government that revelled in its national coronavirus command centre, the state of disaster, and the strictures of Nkosazana Dlamini-Zuma who pro-

moted the idea of economic collapse as the gateway to radical transformation. And the murder of Collins Khosa is mentioned only in passing. Similarly, the origins of Covid-19 are treated in orthodox fashion without comment on the damaging consequences of Chinese government secrecy.

Outdoor exercise, and the sale of alcohol and tobacco products were all outlawed at some point and each ban had deleterious consequences. Karim records that he was initially sceptical about the last two bans and remained so regarding smoking, which was medically pointless and simply encouraged illicit trading. But he came round to supporting the alcohol ban, while questioning the original motivation, as it reduced violence and road crashes, easing pressure on hospitals.

Some of the prohibitions set by the Department of Trade and Industry are now legendary: no open-toed sandals, cooked chicken or short-sleeved T-shirts could be sold. Karim is suitably scathing about these measures. Genuine public health restrictions were brought into disrepute, diminishing trust and tainting the work of the MAC, which had nothing to do with these bizarre prohibitions. Yet in November 2020 potentially suicidal super-spreader events involving students were allowed to proceed. Karim is also dismissive of the impact of Cuban doctors as a purely political gesture without medical motivation, and observes that South Africa has 'deep pockets when it comes to Cuba'. He also asks rhetorically whether anyone has been held accountable for the armed forces' purchase of Interferon. The regulatory regime he describes as a mess and gross corruption around contracts and supply chains as a 'looting fest' and a 'feeding frenzy'

that invoked public despair and severe loss of faith.

At the MAC Karim encouraged diversity of opinion, seeking sufficient consensus to construct its advisories. Rightly, he believed that group think would lead to intellectual atrophy. What he strove for from the MAC was plausible advice based on sound science explained in understandable fashion that would earn enough trust among citizens that they would think for themselves and establish a measure of personal control. One example was the virus reproduction rate (R_0) whose regulation was crucial to bringing the pandemic to an end. Nonetheless, in spite of these impeccable motives he was targeted by the lunatic fringe of denialists and conspiracy theorists. And when the MAC put forward a cautious plan to re-open schools in June 2020, he was called 'Dr Death' by the Economic Freedom Fighters. He does not, however, mention the concerns of teachers who were more at risk than children. The issue of taxis was always contentious, dealt with by the MAC in terms of occupancy ratios and ventilation measures. As usual, the industry was a law unto itself under pressure from drivers and commuters and this is an example where advisories and regulations were probably illusory. The same goes for oxygen supply: in the Eastern Cape policy had no effect in the face of systemic administrative failure.

Covid-19 is a relatively stable virus with potential for rapid vaccine development and indeed several were available by the end of 2020, a remarkable achievement attributable to new technology. The global need for vaccine for vulnerable groups was addressed by Covax, a co-operative venture. It was, however, undermined by complex

factors most notably the ability of rich nations to hedge their bets by buying forward even when vaccines had not yet been tested. In other words, vaccine was commodified instead of treated as a public good. Karim uses the concept of vaccine nationalism, and even vaccine apartheid, but notes that South Africa was tardy in paying Covax. He also criticises over-enthusiasm for vaccination and a quick-fix mentality while acknowledging the need to counter conspiracy theory.

Then there was the inevitable problem of mutations. These tended to be labelled geographically, a habit Karim deplores while admitting that scientific names were hard for the public to remember. So, China, South Africa, Brazil and India were all tarred with a viral brush. In the case of Omicron, whose discovery in South Africa led to a European travel ban, there was no evidence that it had not originated elsewhere. Patient zero is usually anonymous. The World Health Organisation woke up late to this misnaming before it adopted neutral nomenclature based on the Greek alphabet.

Along with rapid vaccine development came a revolution in scientific publication. Such a contagious and damaging virus required a different approach to global information sharing and on one occasion Karim and his wife Quarraisha wrote a paper on Omicron epidemiology in eight hours that was published the same day. This was also the antidote to the infodemic of lies: Karim quotes Jonathan Swift who observed that falsehood flies while truth limps along behind. With HIV/AIDS, fakery traded on fear and proved profitable for the unscrupulous. The pandemic had its parallels.

Slim Karim does not suffer from a lack of confidence or self-esteem. He reveals that the MAC role assumed in March 2020 was his tenth concurrent job, although half of them were at CAPRISA. MAC soon dominated, but can anyone effectively hold down so many jobs? There is also considerable detail about awards and prizes that should perhaps have been confined to the appendices. However, his eminence is confirmed by fellowship of the Royal Society (FRS) closely associated with his hero, Newton. Karim's life exhibits an astonishing and impressive circularity.

Good science is like democracy: it has its weaknesses, but it is vastly preferable to the alternatives. The pandemic probably strengthened science's role globally in spite of the malign influence of social media. We are now in Covid-19's third era, that of treatment

through drugs such as Paxlovid. But another pandemic will eventually emerge and Karim goes into considerable detail about the integrated response structure that will be needed. In particular, he suggests that South Africa's lost capacity to manufacture vaccines be restored. None of his advocacy can be faulted, but he admits that our public health system is a shambles because of ineptitude and corruption. Like everyone else, he has no ready answer to this problem.

Karim concludes by emphasising that successful science depends above all on global co-operation. The experts much derided by right-wing populists are building bridges where others are busy constructing barriers. One such a bridge would be an international pandemic treaty that could soon be ratified by South Africa among other countries.

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