When the Machine Stops: A COVID-19 Con-fusion of Ideas and Numbers

Ashwin Desai
ORCID iD: https://orcid.org/0000-0003-4091-7449

Abstract

Factories, schools, places of worship, sports and travel emptied out. Governments, following *the* science, locked down. The world literally and figuratively turned outside-in. Using E.M. Forster's turn of the twentieth century short story 'The Machine Stops' as a foil, this article looks at the myriad responses to the spectre of lockdown, the infodemic that accompanied COVID-19, while providing a critical assessment of the special aura that has been given to Modelling. It is an article written in the midst of a virus impact that as soon as its obituary is written, returns, while all scientists and governments engage in the seeming Sisyphean task of flattening the curve. The discerning reader will quickly realise that the article is guilty of what it sets out to expose; a con-fusion of ideas. How else could it be, at a time when the only certainty is uncertainty, raising the spectre of what Lorraine Daston (2020) has called 'ground-level empiricism'.

Keywords: Modelling, infodemic, lockdown, myths

Introduction

> *People never touched one another. The custom had become obsolete, owing to the Machine* (Forster 1979: 120).

E. M. Forster, the master craftsman of novels that exposed the hypocrisy of the English class system, took a detour in 1909 with his short story, *The Machine*

Stops. It tells of the relationship between a mother and son – Vashti and Kuno – who reside in a post-apocalyptic world, where people live alone underground and their essentials are delivered by the omnipotent Machine.

In the world of the Machine that Forster envisaged over a century ago, people only communicate via video screens. Travel is rare. Only one remaining physical book exists, *The Book of the Machine,* published by the Central Committee of this world society. People living in their isolated pods underground cannot touch or smell others, nor do they have any sense of space. In forms reminiscent of Facebook and Zoom, people only connect via the threads of the Machine. The 'clumsy system of public gatherings' had long since been abandoned.

Life is the Machine

Vashti, like most people, is sickened by the surface of the earth and cannot contemplate life beyond the Machine. Her room consists of a maze of buttons, which, when pressed, deliver water, heat, music, clothing, food, and especially communication with others. She is 'in touch with all that she cared for in the world' (1979: 113). She never leaves her tiny room, never goes out into the fresh air, never does any exercise; 'a swaddled lump of flesh … with a face as white as a fungus'.

Vashti is Happy with her Lot

Eerily, Forster seems to have already envisaged life as we know it, a prism through which we see and inhabit the world, a kind of internet which dominates intellectual life. Research involves swallowing and regurgitating what people already know from the vast archives of the Machine. Field-work on earth's surface is prohibited. One lecturer forcefully warns against 'first-hand ideas' and insists that knowledge is accumulated through ideas that must be constantly re-cycled.

One day, Kuno contacts Vashti and demands she speak to him 'not through the wearisome Machine', but personally. With debilitating angst, Vashti travels on an airship to the other side of the earth to talk with her son. It is a singular and exceptional act.

While Vasthi has adjusted to and even enjoys the Machine, Kuno rails against it:

> Cannot you see, cannot all you lecturers see, that it is we that are dying, and that down here the only thing that really lives is the Machine? [...] It has robbed us of the sense of space and of the sense of touch, it has blurred every human relation and narrowed down love to a carnal act, it has paralysed our bodies and our wills, and now it compels us to worship it (1979: 131).

Vasthi leaves in disgust, determined to have nothing more to do with her son.

But then the unthinkable happens. The Machine fails. The Mending Committee, Eskom-like, keeps promising to fix it. But the system finally breaks down. Mayhem ensues, with people 'crawling about … gasping for breath… yelling for… respirators, or blaspheming the Machine …' (1979: 143 - 144).

It is as if Foster had dealings with Marty McFly. With COVID-19, the machine has broken down. As the virus spreads and kills and lockdowns are imposed, a mayhem of social consequences has been let loose. How is the Machine to be started again? Ought it be?

The Thinness of Models

> *'Have you guessed the riddle yet?' the Hatter said, turning to Alice again. 'No, I give up', Alice replied. 'What's the answer?'* (Carroll 1898: 91).

Nothing exemplifies a world battling to respond to the virus than the way in which Big capital, philosophers and sections of the Left have responded to the lockdown, made all the more bewildering as positions have swung as widely as the approaches used. Jacob Wallenberg, Swedish heir to one of the world capital's most formidable empires, railed against the lockdowns:

> There will be no recovery. There will be social unrest. There will be violence. There will be socio-economic consequences: dramatic unemployment. Citizens will suffer dramatically: some will die, others will feel awful …. I am dead scared of the consequences to society

> […] We have to weigh the risks of the medicine affecting the patient drastically (cited in D'Eramo 2020: 23).

Philosopher Giorgio Agamben, who made his reputation with his explication of the concepts of 'bare life' and 'states of exception', argues in terms reminiscent of Forster's 'provisional dictatorship' (Forster 1979: 142), that '"The invention of an epidemic' is being used to severely restrict freedom, justifying the state of exception"' (cited in D'Eramo 2020: 23 - 24).

Boris Johnson, the United Kingdom Prime Minister initially railed against a hard lockdown. On 3 February, critiquing Wuhan-style lockdown, he thundered: 'We are starting to hear some bizarre autarkic rhetoric, when barriers are going up, and when there is a risk that new diseases such as coronavirus will trigger a desire for market segregation. Humanity needs some government somewhere that is willing at least to make the case powerfully for freedom of exchange' (Johnson 2020). As history will note, Johnson would change his position a few times as the viral crisis unfolded.

The Left, on the other hand, in the United Kingdom for example, demanded the need to enforce the lockdown. Lindsey Graham, writing in *Counterfire* (20 April 2020) argues:

> The truth is that Johnson and the Tories didn't want the lockdown… They are now frightened to lift because they are worried about what the public will say… they thought there would be a backlash against the lockdown, and they are constantly surprised that many people are dealing with it and are in support of it as a means of combatting the virus … Labour's new leader Kier Starmer's … major question has been, 'where is the exit strategy for the lockdown?' But this can only come when there is proper tracing and testing …. Business as usual will be the demand of the employers and their friends among politicians. It should not be our demand. There are many problems with the lockdown …. But the answer is to provide resources to deal with these demands ….

In parallel to Agamben's position, those who question the very veracity of the pandemic argue that flu kills more people and raising the question as to the power of pharmaceutical companies. Ian Davis, for example, argues that,

> The State's and the MSM's [Mass Media] insistence that anyone who question any vaccines is some sort of whacked out, new age, science Luddite is total nonsense. No one will be permitted to question vaccines, and that fact alone should be sufficient to raise anyone's suspicion. From … the WHO and … to Imperial College the response to the C19 pandemic has been driven by foundations and pharmaceutical corporations with considerable investments in vaccine development. Of course, they would like to see global mandatory vaccination (Davis 2020a).
>
> Meanwhile, as positions were being staked out, the travelling virus has prevented accurate estimates of key parameters such as reproduction rate, size of infected population and number of benign infections. The result has been a chaos of numbers. Second, like annual influenzas, the virus is mutating as it courses through populations with different age compositions and health conditions… Third, even if the virus remains stable and little mutated, its impact on younger age cohorts could differ radically in poor countries and amongst high-poverty groups (Davis 2020b: 7-8).

Mike Davis went on to point out that in poorer countries, during the Spanish Flu of 1918, there was a relationship 'between the flu and malnutrition, which suppressed their immune response to infection and produced rampant bacterial, as well as viral, pneumonia' (Davis 2020b: 8 - 9). He goes on to warn that,

> This history – especially the unknown consequences of interactions with malnutrition and existing infections – should warn us that COVID-19 might take a different and more deadly path in the dense, sickly slums of Africa and South Asia. With cases now appearing in Lagos, Kigali, Addis Ababa and Kinshasa, no one knows (and won't know for a long time because of the absence of testing) how it may synergize [sic] with local health conditions and diseases. Some have claimed that because the urban population of Africa is the world's youngest, with over-65s comprising only 3 per cent of the population – as opposed to 23 per cent in Italy – the pandemic will only have a mild impact. In light of the 1918 experience, this is a foolish extrapolation. As is the assumption that the pandemic, like seasonal

> flu, will recede with warmer weather (2020: 9).

Despite Davis' caution, the narrative of the 'truth' of numbers has come to the fore during the debates around COVID-19. Central to this is modelling, a system which has greatly influenced government strategy across the globe. This appears to be the only handbook from which governments read. Yet, the whole notion of modelling needs to be critically assessed rather than just accepted without consideration, as Martin Enserink and Kai Kupferschmidt point out in an article in *Science* (27 March 2020), entitled *With COVID-19, modelling takes on life and death importance*. They quote Devi Sridhar, a global health expert at the University of Edinburgh, who argues that policymakers have depended too heavily on COVID-19 models, without considering how 'the theoretical models will play out in real life' (2020: 1415). An early example of this is the modelling of Neil Ferguson at Imperial College, London, whose work the UK government, and consequently, many others, have heavily relied upon:

> Not only did this document warn that, unchecked, the virus could kill 510,000 people, it counselled that even with the government's then preferred strategy of 'mitigation', more than 250,000 would die, with the National Health Service rapidly becoming wholly overwhelmed. The stark conclusion did not come from Imperial redrawing its model. It was the result of inputting data emerging from the progress of the pandemic in Italy, which showed among other things that far more patients than previously estimated required scarce intensive care beds …. The impression that a mathematical model prompted a government *volte face* led to a torrent of critical attention on Prof Ferguson and his team …. Some scientists point out that the model was originally built for a different disease – influenza… Meanwhile, a rival group of academics at Oxford university released a paper seemingly contradicting the conclusions on likely fatalities drawn by Imperial (Ford 2020).

As Martin Cohen (2020) points out, the

> [the] history of science shows, in Thomas Kuhn's phrase, that scientific progress is not and has never been solely and calmly about

> facts – far less, Platonic truths – at all, but is instead, a brutal fight in which the dominant view (or paradigm) invariably seeks to suppress its rivals.

Yet, time and again, we hear governments commenting that they are led by 'the' science. But *the* science is not the entity that is entrusted to make political decisions, and by using *the* science as a fig-leaf for every decision, broader considerations are crowded out. As sociologist Jane Bacevic points out:

> To begin with, there is no such thing as the 'best science available'. Scientists regularly disagree about different issues, from theoretical approaches to methodological findings, and decisions about what *kind* of scientific advice is taken into account are highly political. The individuals, disciplines and institutions that are invited to the table reflect the distribution of research funds, prestige and influence, as well as values and objectives of politicians and policymakers (2020).

The dominant modelling narrative, with its neat mathematical statistics and graphs, does not and cannot anticipate the consequences of lockdown, like the impact of a deteriorating economic situation on public health itself. It leads to 'a three-way tussle, between protecting health, protecting the economy, and protecting people's well-being and emotional health' (cited in Enserinck & Kupferschmidt 2020: 1415).

One of the hazards faced by those trying to impact on policy is to make summary judgements, without the benefit of understanding the ways in which the virus will mutate. With COVID-19, once the WHO had defined it as a pandemic, governments quickly followed each other in implementing lockdowns and wide-ranging punitive measures to control such a move. In South Africa, there were calls, for example, to isolate old people in townships and squatter settlements, raising the spectre of leper colonies from biblical times, the argument being that old people are more susceptible to the virus (Broadbent & Smart 2020). But, as Davis (2020b) points out, this does not take into consideration local health conditions in which malnutrition could also cause children to become prone to the virus. In South Africa, one also needs to take account of who are the 'bread-winners' in many families. In the vast majority, old people are the ones who collect social grants, thus providing a

limited, but necessary income for the wider family. Isolating them, and in many ways hastening their deaths, might not make economic sense, but rather, may make the cure worse than the disease.

In response to a question of why we are so far behind in research on pandemics, Professor Caitlin Rivers hauntingly points out that 'there is not as much thinking specifically on these emerging infectious disease threats, like the one we're facing now – again, because it's hard to make a career out of something that doesn't come around very often' (cited in Resnick 2020). As David Harvey (2020) points out:

> Corporatist Big Pharma has little or no interest in non-remunerative research on infectious diseases (such as the whole class of coronaviruses that have been well-known since the 1960s). Big Pharma rarely invests in prevention. It has little interest in investing in preparedness for a public health crisis. It loves to design cures. The sicker we are, the more they earn. Prevention does not contribute to shareholder value.

In a country such as South Africa, with its painful and ongoing history of HIV/AIDS, we are forced to take co-morbidities into account. At present, 2.5 million people in South Africa are HIV positive and not currently on anti-retroviral medicines. This is entangled with a multitude of other diseases such as hypertension, diabetes, and tuberculosis. Researchers project 94,835 to 239,610 deaths per year due to COVID-19 (Geffen 2020). In this context, what has been highlighted in South Africa, is the fact that the country has the additional problem of 'colliding epidemics', a factor which could raise the mortality rate significantly above that of other countries. And, while Government has promised mass testing during the period of lockdown,[1] what has been lost, it is argued, because of the immediacy of COVID-19 and rapid reaction, is an opportunity to test patients for underlying conditions, deepening our understanding of community health issues and how to deal with them. While beyond the scope of this chapter, it must be noted that questions have been raised globally as to how many deaths are related to underlying health conditions such as diabetes, hypertension, and heart disease, and whether these

[1] As of 28 April 2020, only 185 497 people had been tested in South Africa (www.gov.za).

mortalities have summarily been recorded as COVID-19 cases.

There is also a disjuncture in terms of testing and indicators, as many countries have pointed out. It is difficult to give accurate and exact data when there are high levels of differentiation between testing, modelling, and degrees of lockdown. For example, countries such as Germany have a far higher testing rate, where even those showing flu-like symptoms are tested. As a result, there are more positive COVID-19 cases and fewer deaths, whereas in the UK, only patients who are sick enough to be admitted to hospital are tested, and these differing scenarios are played out from South Korea to South Africa. In the fashion of the times, the headlong rush towards a one-size-fits-all policy has led to a concomitant con-fusion of ideas and statistics. As Research Professor of Epidemiology, Alex Welte, has pointed out:

> Those of us trying to model the COVID-19 pandemic should try to be humble; there is more we don't know than we do. Anyone who claims to know what the infection or mortality rates are for this disease is either deluded or dishonest… But, with time-tested scientific analysis, some things are predictable: on 17 April, after three weeks of lockdown, the sun will rise in Cape Town at 7:10am, and we will still be at the start of a COVID-19 outbreak (Welte 2020).

In South Africa, the much-celebrated response to COVID-19 looked suspiciously to have been based on the Imperial College report (Forster's second-hand ideas). With advice limited to scientists, little consideration was given to the economic and social consequences of the lockdown. For example, the whole notion of physical distancing in cramped, living conditions, with often six to 10 people living in one house, was seemingly ignored and no guidance given to people faced with this circumstance. There seemed to be a complete ignorance of food supply chains and the dangers of extreme hunger. There are other Kafkaesque rules that grind people down, as the lines between essential and non-essential work are arbitrarily drawn. When prepared food was banned, Richard Poplak pointed out: 'And yet hot prepared meals remain a lifeline for many families who don't have the means to cook at home (AKA many people in informal settlements) or who work in essential services, *and are too busy saving lives to roast a fucking chicken'* [sic] (Poplak 2020).

Forster writes,

> ... the Machine did not transmit *nuances* of expression. It only gave a general idea of people – an idea that was good enough for all practical purposes, Vasthi thought. The imponderable bloom, declared by a discredited philosophy to be the actual essence of intercourse, was rightly ignored by the Machine, just as the imponderable bloom of the grape was ignored by the manufacturers of artificial fruit (1979: 111-12).

The lockdown was imposed with the assumption that the society was uniform, and the effects would take a standard form as the ideology of 'we are all in this together' became the governing manta. Only after the policy was announced was there a desperate scramble to mitigate the worst effects. And only into week four of the lockdown did President Ramaphosa make some provision to deal with the spiralling negative impact on the poorest in society as the 'togetherness mantra' was exposed as a mere variant of apartheid's euphemism 'separate but equal', which in practical terms had meant 'you stay in your group area and I will stay in mine'. This came after concerted pressure from those working in areas of poverty, inequality, and food security, particularly amongst the young, the elderly, and the pregnant (Jonah, May & Sambu 2020). The rampant inequalities were exacerbated by the lockdown as food supply chains dried up and hunger began stalking. A haunting indication of this has been the protests that arose over undelivered food parcels, with police having to fire rubber bullets in the area of Mitchells Plain to disperse crowds (Steenkamp 2020), or in Buffalo City in the Eastern Cape where food vouchers were supposed to be given out. This lead to huge crowds and no physical distancing, causing the army to fire on those gathered. It is one thing to model how the disease unfolds, but it is just as crucial to monitor the social consequences. As Martin Cohen points out in an article entitled *Thinking Errors and the Coronavirus* (2020):

> We should be suspicious of experts recycling old advice. After all, they may be guilty of two more cognitive biases: the phenomenon known as 'one model thinking' whereupon only evidence that fits the model is visible. And there is Confirmation Bias, which is the idea that people seek out information and data that confirms their pre-existing ideas while ignoring contrary information however potentially significant for the decision. The almost non-existent

> political and media examination of the range of views and strategies for the coronavirus shows that this is one of the most dangerous biases of them all.

South Africa was no different in this regard, with the government relying exclusively on scientists who were found wanting on analytical aspects of social consequence and context. The selected scientists became the power, and nuance was in short supply. In this context, Andy Stirling tells us that 'the crucial distinction between 'uncertainty' and 'risk'. A risk is what results from a structured calculation that must necessarily reflect a particular view. An 'uncertainty' is what these risk calculations might leave out' (cited in De Waal 2020). How we respond to COVID-19 is one crucial aspect that is left out of the calculations.

Once physical distancing was adopted as policy, it was rigorously taken up by the police and army. As lines on pension and grant day at supermarkets snaked down streets and round corners, physical distancing meant that one could literally be in another township at the end of the queue. To ask people, many of them having to use walking sticks and needing to sit down to rest old limbs to keep the required distance was impossible. It did not stop police from beating and teargassing people. It led the United Nations Human Rights Office to report that South Africa has created a 'toxic lockdown culture …. Rubber bullets, tear gas … whips have been used to enforce social distancing in shopping lines' (Karrim 2020).

That is the danger with a policy that cannot be implemented; conditions are created for the police and army to use violence, instead of convincing people to change their behaviour. All this was made even more complicated as *the* scientists began to fall out with some labelling aspects of the policies irrational. In this context, De-Waal makes the important but oft forgotten point as we become seduced by top-down diktats:

> We shouldn't assume a too simple trade-off between security and liberty, but rather subject the response to vigorous democratic scrutiny and oversight—not just because we believe in justice, transparency and accountability, but also because that demonstrably works for public health (De Waal 2020).

Ashwin Desai

The Present is the Disease

> *a gigantic phantom, bearing on its brow the sign of pestilence. The growing shadow rose and rose, filling, and then seeming to endeavour to burst beyond, the adamantine vault that bent over, sustaining and enclosing the world* (Shelley 1826: 204).

Mary Shelley's words from her novel, *The Last Man*, written in 1826, are chillingly familiar, the plague of old reaching its tendrils into the present moment. The COVID-19 pandemic, which has and will fundamentally change our lives, spreading as any virus does, rapidly and with a deadliness reminiscent of 1820, the Spanish Flu (1918), and more recently, HIV/AIDS. However, on this occasion, the virus arrived taking advantage of new forms of travel, a global communication network which with every second relayed, spread and informed the world of the latest news. As countries scrambled to lock down, placing their citizens under effective house arrest, the internet and social media platforms suddenly became the conduit for information in the majority of households. Like no other virus before it, COVID-19 has been documented, observed, tweeted, debated, and diarised through a media machine which in itself has morphed into every single cell of our beings; every news channel, web page, Instagram feed, Facebook post, Twitter comment, relaying the latest figures, deaths, analysis, predictions, and new ways of being. Alongside this is a rise in 'fake news', misinformation, WhatsApp messages quickly disseminating to all corners of the globe, using the virus to highlight societal problems, using a concoction of religion, myth and politics to fuel its path. Blame has been quickly laid upon various suspects: 5G, China, trade in animals; and cures from all corners of the globe have been heralded. This is not just a pandemic, in digitising our lives in search of safety, it becomes a burgeoning 'infodemic'.

The COVID-19 virus came relatively quickly on the heels of another outbreak back in 2003, when SARS began to spread from the Far East across the world. As Wald points out in her book, *Contagious Cultures, Carriers, and the Outbreak Narrative* (2008: 4):

> SARS coverage dramatized [sic] the danger of human contact in an interconnected world. Photographs featured the fearful image of human interdependence in the masks sported by shoppers, store

> owners, flight attendants, and pilots, even by small children as they walked to school or pirouetted in ballet class. The masks depicted what SARS threw into relief: human beings' futile efforts to defend themselves against the threat of illness in the daily interactions made global by contemporary transportation and commerce. Human networks became the conduits of viral destruction.

Whereas the mosquito of old flew from one human to another, now the mosquito has morphed into the aeroplane, sneezing its way through customs controls across the globe, as the 'vast cities of America, the fertile plains of Hindostan, the crowded abodes of the Chinese, are menaced with utter ruin…The air is empoisoned, and each human being inhales death' (Shelley 1826: 184).

One of the ironies of the heightened infodemic is how societies suddenly placed under lockdown to mitigate the spread of the virus, have turned to social media and the internet for news, in an effort to keep themselves safe, concomitantly fuelling digital misinformation. While some may be unintentionally forwarding information that they have not verified, the sheer volume of material is hard to keep up with, and fact checking sites cannot cope.

For example, at the onset of the outbreak in South Africa, one particular story highlighted the way in which fake news is spread.

An article on News24 on 9 April 2020 reported that the Bill and Melinda Gates Foundation had suggested that a vaccine would be initially tested on Africans. The article was retracted after the editor decided to investigate the story further, and found it to be information taken out of context. The stories are given veracity because they have historical and contemporary resonance. In the midst of the pandemic, for example, two prominent French doctors discussed the fact that virus vaccines 'should be tested on poor Africans' (Ure 2020).

As news spreads at the click of a button, so the conspiracy theorists and purveyors of fake news were able to tap into the fear and social panic that the virus has thrown up into the ether. Social media platforms, such as Facebook, Twitter and WhatsApp have scrambled to try to control the spread of false information that cascades as if a waterfall of information in the height of monsoon. In an environment which is constantly searching for a remedy, cure, solution, the propensity to believe is strong. Health Law Professor, Timothy Caulfield from the University of Alberta reiterated this point: 'Social

media is a polarisation machine where the loudest voices win. In an outbreak, where you want accurate, measured, discourse, that's kind of a worst-case scenario' (De Vynck, Griffin & Sebenius 2020).

And in South Africa, a nation scarred by the history of the HIV/AIDS epidemic, the coronavirus has brought to the fore, stigma, fear, and panic. From the late 1990s, then President Thabo Mbeki categorically denied the information given by scientists regarding the epidemic and its impact on South Africa, leading to a period of hesitation and bogus dietary cures, which subsequently resulted in thousands of people dying.

As history informs us, when anxiety levels increase, the notions of myth and prejudice and the threat of moral panics 'hum with the exquisitely tenacious fragility of an ever-present threat' (Wald 2008: 17). In Bram Stoker's *Dracula,* foreign ships bring plague from the East and a collapse of morality,

> such assumptions prefigure modern racist fear of AIDS as a disease brought to Europe and North America by Africans and Haitians. Stories of foreign sailors and ships bearing alien infection do not belong to folklore and fiction alone; restrictive immigration policies and an emphasis on moral judgment and social exclusion result from believing them. Dangerous infection can be understood as moral and ideological, not only as biological (McWhir 1996: 29).

Myth here can be described as a '"small case of stories that possess both credibility and authority", which they derive from their expression "of paradigmatic truth", and through which they "evoke the sentiments out of which society is actively constructed"' (Wilson cited in Wald 2008: 10). Historically, blame, particularly in times of crisis, is often laid at the door of certain groups in a society. As the novelist of dystopias, Margaret Attwood remarks:

> … during the Black Death the following people got blamed pretty much in this order: lepers, as they went from town to town; Gypsies, because they travelled around; Jews, for all of the usual reasons. And witches, you know about those witches? Just causing plagues all over the place. So, if you could if you could destroy all those people then maybe you wouldn't have the plague. I guess the impulse is always to burn something (cited in Flood 2020).

In 2020, some placed blame at the heart of the communication and global networking system, an ironic twist during a period when we are more reliant than ever on the machine; protestors started burning masts and threatening workers involved in the roll-out of a 5G internet network – an alleged cause of the virus. With scientists and spokespersons liberally handing out advice with media at their disposal, everyone becomes both expert and *counter*-expert for good measure. The latter is a growing phenomenon of those who strike at the heart of what is seen as establishment opinion. Sometimes, they revel in conspiracy theories, but at other times, they point out the vested interests that accompany opinions dressed up as objectivity.

The most significant and potentially damaging case of quick-fire, unverified research arose when a number of scientists began to question the findings in a number of papers published in high level medical journals, including the Lancet and the New England Journal of Medicine, by a small US analytics company called Surgisphere, with just 11 employees. After more probing, it was discovered that the research was based on an analysis of health records from patients on six continents, including Africa, where there were hardly any patients at the time, and where it was unlikely that records would be linked to an international health database. The authors, Desai and Mehra (both doctors),

> published a hydroxychloroquine study involving 96,000 patients around the world which found the drug was associated with a higher risk of heart problems and death in those with COVID-19… Surgisphere's Quartz Clinical global database was used, this time to obtain the data from 1,200 hospitals. The study involved so many hospitals and people that its findings, to many, seemed definitive (Davey 2020).

Their findings started to raise alarm bells amongst scientists. Dr. Chaccour, one of those leading doubts about Desai and Mehra's findings, said 'Here we are in the middle of a pandemic with hundreds of thousands of deaths, and the two most prestigious medical journals have failed us' (Kelly & Enserink 2020: 1041). Peter Pomerantsev tells us 'we live in a world in which the means of manipulation have gone forth and multiplied, a world of dark ads, psy-ops, hacks, bots, soft facts, deep fakes, fake news, ISIS, Putin, trolls, Trump' (2019). He could have added fake science that can pass muster, get

published in top journals, and impact millions of lives.

In South Africa, the National Research Foundation's A-rated Professor, Tim Noakes, was called to task after giving an interview about COVID-19 on a local radio station. He made claims that the virus is a DNA (double stranded molecule) virus rather than an RNA (single molecule), as well as the fact that Hydroxychloroquine may be a cure for the virus.

> Despite admitting that he has no expertise in virology, there's no caution and no caveats. This is not the way an ethical scientist should talk to the general public. He also talks in a semi-conspiratorial tone, with the implication that he and a few others have it right while the vast majority of doctors and scientists are too stubborn to see it their way (Geffen 2020).

GroundUp reported that the interview was dangerous, misleading, and contained substantial errors; not the first time that Noakes has been in hot water, as back in 2017 he was also brought to book about his infamous propositions on the human diet. In this instance, Noakes retaliated:

> What I find particularly interesting is that Geffen is a recently graduated computer scientist with zero training in medicine, physiology, pharmacology, or pathology. Yet he believes that it's quite appropriate to teach me medicine and physiology, despite the fact that I taught physiology to medical and sports science students for more than 30 years (Fokazi 2020).

Noakes raised the paradox that 'medicine is about hypothesis' and 'the beauty of science is that hypotheses drive thinking' (Fokazi 2020). Despite his defence of opening up such discussion, he was later to retract his conjectures on the virus, apologising for any misleading information.

Throughout the world, there have been numerous cases of misinformation, home remedies, cures, and fake research. In India, with one of the world's largest and most mobile societies, where fact-checking sites struggle to keep up with the spread of misinformation, home remedies and religious fervour circulate as fast as any virus, while cures can be found in a plethora of remedies, including cow dung and cow urine. Similarly, in Nigeria, drinking urine has been touted as protection, and in Indonesia, Rohanna

Kuddus reported that the Council of Ulama was convinced that COVID-19 was 'a rebuke from Allah' on those who indulge in *haram* food, while the country's Minister of Health was certain that the country was 'immune' to the virus due to its commitment to prayer (2020: 35). And, after an 'Indonesian professor of medicine claimed that her research had demonstrated the efficacy of ginger, turmeric and lemongrass in building immunity, the demand for *jamu* and its *empon-empon* ingredients soared, making them even less affordable to the poor' (Kuddus 2020: 36).

In Brazil, President Jair Bolsanaro displayed echoes of Thabo Mbeki's AIDS denialism:

> After initially dismissing COVID-19 as 'just a sniffle', he would later issue an icy dictum: 'Some people are going to die. I'm sorry. That's life'. For it would only be oldsters who succumbed' (Conti 2020: 45).

Other widely disseminated myths are that the virus cannot spread in hot and humid weather, gargling with salt-water can kill the virus, and in Madagascar, the President launched COVID-Organics, a herbal tea which he claimed could kill the virus, and which was liberally given to children (Shaban 2020).

But perhaps the most damaging and controversial claim came from the US leader Donald Trump, supposedly the most ardent opponent of fake news, who in his daily White House press briefing suggested that in order to combat the virus, the injection of disinfectants may prove efficacious (Hyde 2020).

All the time, there are those demanding that The Machine cranks up once more. Suddenly, the worries about who are most vulnerable to the virus and the conditions that exacerbate loss of life are drowned out, as the language of science transmutes into the debilitating effects of a failing economy, and the need to get people working again. Within a mere few days, one sees scientists who called for a lockdown until the curve flattens then without a backward glance and in the face of increasing infections, support an easing of the lockdown. Where once the politicians said they were following *the* science, the scientists were now seen to be following the politicians. As Harvard University epidemiologist William Hanage points out, for politicians to rely on models to prevent the virus spreading in a context where the virus is hardly analysed is risky: 'It's like, you've decided you've got to ride a tiger', he says, 'except you don't know where the tiger is, how big it is, or how many tigers there actually

are' (in Enserinck & Kupferschmidt 2020: 1414 - 1415). He should have added that to rely on the scientists who manufacture the models, given the trespass of power and politics into their work, is even more scary.

Every day, we come to hear of the dramatic increase in cases, as statistics and information bombard us. Counting is complicated, and begs questions of comparison, as countries label who dies of COVID-19 in different ways. But still, the media persist, with headlines that tell us Brazil has just passed England in the number of COVID-deaths, with Italy, after leading for a few weeks, fading into fourth place. One could easily think one was watching results of World Cup soccer rankings, where the field is flat, and the rules of engagement codified. The basic rules of social science in which numbers ought to be critically assessed were suspended. And all through this, as *the* science was touted by the National Command Council (NCC), the basic protocols were jettisoned, as forecasts changed daily, and many glowed in the media spotlight as their modelling gave them incredible power to influence the lives of tens of millions. In this context, Lorraine Daston's comments are apposite:

> At moments of extreme scientific uncertainty, observation, usually treated as the poor relation of experiment and statistics in science, comes into its own. Suggestive single cases, striking anomalies, partial patterns, correlations as yet too faint to withstand statistical scrutiny, what works and what doesn't: every clinical sense, not just sight, sharpens in the search for clues. Eventually, some of those clues will guide experiment and statistics: what to test, what to count. The numbers will converge; causes will be revealed; uncertainty will sink to tolerable levels. But for now, we are back in the seventeenth century, the age of ground-zero empiricism, and observing as if our lives depended on it (2020).

There is a haunting moment when Vasthi is on an airship and slips:

> she behaved barbarically-she put her hand out to steady her. 'How dare you!' exclaimed the passenger. 'You forget yourself!' The woman was confused and apologised for not letting her fall. People never touched one another. The custom had become obsolete, owing to the Machine (Forster 1979: 120).

Not too long ago, we would have laughed at these lines, but as physical distancing, quarantines were put into place and touching was banned, we began to live in the times of Forster's Machine. Žižek, who published a book within a couple of months of our first awareness of the global reach of the virus, acutely captures this moment in history:

> The coronavirus epidemic confronts us with something previously thought to be the impossible: the world as we knew it has stopped turning, whole countries are in a lockdown, many of us are confined to our homes facing an uncertain future in which, even if most of us survive, economic mega-crisis is likely... The impossible happened, our world has stopped, AND impossible is what we have to do to avoid the worst, which is – what? (2020, p. 107).

While nobody can come up with the answer, what we do know is that this cannot be a matter of *the* science. Of core concern, though, now more than ever, is to ask questions about what it is to be human.

The virus, while rushing across the globe, has also highlighted outdated boundaries in the academy as scientists dominate the NCC and social scientists knock on the door, desperate to be allowed in. In this regard, it might be worthwhile to learn the lessons of Ebola, as De Waal points out:

> In his book *Ebola: How a People's Science Helped End an Epidemic* (2016), the social anthropologist Paul Richards argues that the deficiency in the modelling is best explained by changes in intimate social behaviour that could neither be captured by models nor even fully explained by people who were themselves altering the critical risk behaviours. Anthropologists themselves didn't connect the dots at the early stage of the outbreak. They had researched funerals and funeral rituals, but not the real danger point for contagion, which was the preparation of the body for burial. Family care for the sick was the other main context of transmission. Community health workers, social anthropologists, and epidemiologists had to speak to one another, understand each other's knowledge, and find ways of communicating it (De Waal 2020).

Why should the human sciences be reduced like the United Nations to

mop up after the bombs have exploded. Is it not a time for the humanities to reach out to the scientists, to show that the worlds of the human and non-human are inextricably linked, that epidemics are more than a medical issue and to renew the path to a people's science? (Baldwin 2005).

References

Bacevic, J. 2020. There is no Such Thing as Just 'Following the Science'. Coronavirus Advice is Political. *The Guardian* 28 April. Available at: https://www.theguardian.com/commentisfree/2020/apr/28/theres-no-such-thing-just-following-the-science-coronavirus-advice-political

Baldwin, P. 2005. *Disease and Democracy: The Industrialized World Faces AIDS*. Berkeley, CA: University of California Press. https://doi.org/10.1525/9780520940796

Broadbent, A. & B. Smart 2020. Why a One-size Fits All Approach to COVID-19 could have Lethal Consequences. *The Conversation* 23 March. Available at: https://theconversation.com/why-a-one-size-fits-all-approach-to-COVID-19-could-have-lethal-consequences-134252

Carroll, L. 1898. *Alice's Adventures in Wonderland*. London: Macmillan & Co.

Cohen, M. 2020. Thinking Errors and the Coronavirus. Off-guardian.org, 19 April. Available at: https://off-guardian.org/2020/04/19/thinking-errors-and-the-coronavirus/

Conti, M. 2020. Pandemonium in Brazil. *New Left Review* 122: 43 - 48.

Daston, L. 2020. Ground-zero Empiricism. *Critical Inquiry* 10 April. Available at: https://critinq.wordpress.com/2020/04/10/ground-zero-empiricism/

Davey, M. 2020. Unreliable Data: How Doubt Snowballed over COVID-19 Drug Research that Swept the World. *The Guardian* 4 June. Available at: https://www.theguardian.com/world/2020/jun/04/unreliable-data-doubt-snowballed-COVID-19-drug-research-surgisphere-coronavirus-hydroxychloroquine

Davis, I. 2020a. Coronavirus Lockdown and What you are not being told – Part 2. Off-guardian.org, 20 April. Available at: https://off-guardian.org/2020/04/20/coronavirus-lockdown-and-what-you-are-not-being-told-part-2/

Davis, M. 2020b. The Monster Enters. *New Left Review* 122: 7 - 14.

https://doi.org/10.2307/j.ctv15nbzws

D'Eramo, M. 2020. The Philosopher's Epidemic. *New Left Review* 122: 23 - 28.

De Waal, A. 2020. New Pathogens, Old Politics. *Boston Review* April 3. Available at: http://bostonreview.net/science-nature/alex-de-waal-new-pathogen-old-politics.

De Vynck, G., R. Griffin & A. Sebenius 2020. Coronavirus Misinformation is Spreading all over Social Media. 1 February. Available at: https://www.bloomberg.com/news/articles/2020-01-29/coronavirus-misinformation-is-incubating-all-over-social-media

Du Toit, L. & N. Padayachee 2020. 9 Popular Myths doing the Rounds in Africa about the Coronavirus. Available at: https://www.weforum.org/agenda/2020/04/debunking-9-popular-myths-doing-the-rounds-in-africa-about-the-coronavirus/.

Enserink, M. & K. Kupferschmidt 2020. With COVID-19 Modeling Takes on Life and Death Importance. *Science* 367, 6485: 1414 - 1415. https://doi.org/10.1126/science.367.6485.1414-b PMid:32217707

Flood, A. 2020. 2020. Margaret Attwood: COVID-19 Lockdown is not a Dystopia. 16 April. Available at: https://www.theguardian.com/books/2020/apr/16/margaret-atwood-COVID-19-lockdown-is-not-a-dystopia-handmaid-s-tale

Fokazi, S. 2020. Tim Noakes says Sorry for his COVID-19 Comments .... Well, Sort of. *Times Select* 17 April. Available at: https://select.timeslive.co.za/news/2020-04-17-tim-noakes-says-sorry-for-his-COVID-19-comments-well-sort-of/

Ford, J. 2020. UK Modellers Deploy Heavy Firepower against Virus when a Guerrilla War may be Better. *Business Day* 16 April. Available at: https://www.businesslive.co.za/bd/world/europe/2020-04-16-uk-modellers-deploy-heavy-firepower-against-virus-when-a-guerrilla-war-may-be-better/

Forster, E.M. 1979. *Collected Short Stories*. Harmondsworth: Penguin Books.

Geffen, N. 2020. Tim Noakes Interview is Dangerously Misleading. *GroundUp*, 13 April. Available at: https://www.groundup.org.za/article/tim-noakes-interview-misleading-and-dangerous/.

German, L. 2020. The Coronavirus Crisis: Britain's Ugly Moment of Truth –

A Weekly Briefing. *Counterfire* 20 April. Available at: https://www.counterfire.org/articles/opinion/21118-the-coronavirus-crisis-britain-s-ugly-moment-of-truth-weekly-briefing

Harvey, D. 2020. Anti-Capitalist Politics in the Time of COVID-19. 20 March *Jacobin*. Available at: https://jacobinmag.com/2020/03/david-harvey-coronavirus-political-economy-disruptions

Hyde, M. 2020. Donald Trump's Prescription for Coronavirus: Quite Literally Toxic. *The Guardian* 25 April. Available at: https://www.theguardian.com/commentisfree/2020/apr/24/donald-trump-coronavirus-president-advice-bleach

Johnson, B. 2020. PM's Speech in Greenwich. PM's Office, Downing Street. Available at: https://www.gov.uk/government/speeches/pm-speech-in-greenwich-3-february-2020

Jonah, S.C., J. May & W. Sambu 2020. Lockdowns Threaten Children's Nutrition. 14 April. Available at: https://www.news.uct.ac.za/article/-2020-04-14-lockdowns-threaten-childrens-nutrition

Karrim, A. 2020. UN Human Rights Office highlights 'Toxic Lockdown Culture' in SA. 28 April. Available at: https://www.news24.com/SouthAfrica/News/un-human-rights-office-highlights-toxic-lockdown-culture-in-sa-20200428

Kelly, S. & M. Enserink 2020. The Pandemic's First Major Research Scandal Erupts. *Science* 368,6495: 1041 - 1042. https://doi.org/10.1126/science.368.6495.1041 PMid:32499418

Kuddus, R. 2020. Lemongrass and Prayer. *New Left Review* 122: 35 - 41. https://doi.org/10.1353/ner.2020.0076

McNeill, W. 1976. *Plagues and Peoples*. New York: Anchor Press.

McWhir, A. (ed.). 1996. *The Last Man by Mary Woolstencraft Shelley*. Ontario: Broadview Press.

Pomerantsev, P. 2019. The Disinformation Age: A Revolution in Propaganda. *The Guardian Review* 27 July. Available at: https://www.theguardian.com/books/2019/jul/27/the-disinformation-age-a-revolution-in-propaganda

Poplak, R. 2020. Where Lockdown Meets Crackdown – Government Action is a Velvet Glove Slipped onto an Iron Fist. *Daily Maverick* 22 April. Available at: https://www.dailymaverick.co.za/article/2020-04-22-where-lockdown-meets-crackdown-government-action-is-a-velvet-glove-slipped-onto-an-iron-fist/

Resnick, B. 2020. The US has a National Service for Predicting the Weather. It Needs One for Predicting the Disease. *Vox* 16 April. Available at: https://www.vox.com/science-and-health/2020/4/16/21203293/coronavirus-COVID-19-prediction-models-but-better

Shaban, A.R.A. 2020. COVID-Organics. Madagascar Launches Africa's First Cure for Virus. 22 April. Available at: https://www.africanews.com/2020/04/22/COVID-organics-madagascar-launches-africa-s-first-cure-for-virus//

Steenkamp, T. 2020. Violence and Looting Point to Food Crisis in SA Lockdown. *The Citizen*, 18 April. Available at: https://citizen.co.za/news/COVID-19/2271293/violence-and-looting-point-to-food-crisis-in-sa-lockdown/

Ure, G. 2020. Africa Must Make Sure It's Part of the Search for a Coronavirus Vaccine. 22 April. Available at: https://theconversation.com/africa-must-make-sure-its-part-of-the-search-for-a-coronavirus-vaccine-136531

Urry, J. 2016. *What is the Future?* Cambridge: Polity Press.

Wald, P. 2008. *Contagious Cultures, Carriers and the Outbreak Narrative*. Durham and London: Duke University Press. https://doi.org/10.1215/9780822390572

Welte, A. 2020. COVID-19: What Happens after the Lockdown? *GroundUp* 31 March. Available at: https://www.groundup.org.za/article/COVID-19-what-happens-after-lockdown/

Sardar, Z. 2020. The Smog of Ignorance: Knowledge and Wisdom in Postnormal Times. *Futures* 120: 1 - 12. https://doi.org/10.1016/j.futures.2020.102554

Treichler, P. 1999. *How to Have Theory in an Epidemic.* Durham: Duke University Press. https://doi.org/10.1515/9780822396963

Žižek. S. 2020. *PANDEMIC!: COVID-19 Shakes the World*. New York: OR Books. https://doi.org/10.2307/j.ctv16t6n4q

Ashwin Desai
Professor
Department of Sociology
University of Johannesburg
ashdesai1@gmail.com