

2020: the year of living cautiously

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Abstract

2020 was the year when microbiology burst onto the world stage, not just as the science of small living things, but as the prism through which we understood global events. Clinical logic suffered under pressure arising from an urgent need to confirm or exclude severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. This is a generation's Hobbesian moment in which the public concern for safety and security from infection outweighs the pursuit of personal freedom. The strangeness of a world in which a minute particle wields superhuman power has generated its list of unlikely heroes and mendacious villains. As the year comes to an end, there are glimmers of light amid the gloom: the prospect of an effective vaccine, and life after the pandemic.

2019 casts a long shadow over the wreckage of 2020. In less than a year, the coronavirus pandemic has played havoc with our ideas of civilization. In our public hospitals, a brutal but silent killer continues to stalk our most vulnerable patients among the rubble of a battered health service. Fear, phobia and anxiety have sprouted like weeds in cracked masonry. The patients stay away when they can, avoiding hospitals swamped by successive coronavirus waves. Inside the wire, the staff fear aerosol-generating procedures and untested patients. Diagnostic logic has gone into a deep sleep, traded for a laser-like focus on coronavirus disease 2019 (COVID-19) diagnosis at the expense of all other aetiologies. In hard-pressed centres, COVID-19 is the assumed diagnosis without resort to standard checks. Patients are managed on presumption, often with an antibacterial therapy bonus for the expected co-infection.

Memories of the first few chaotic weeks are still vivid. It was a time when decisions were made on the run, health administrators cancelled meetings and clinical productivity soared. We swung between dead reckoning based on past outbreak experience and moments of toxic anxiety over unfamiliar clinical challenges. The frequent recalibration of personal risk tolerance was draining; the air of cautious optimism unsustainable. In 2019 who would have thought that a mere slip of a virus would threaten the entire global population in less than a year? From go to woe in months. Those who courted burn-out by staying on task for extended periods will be talking about COVID-19 for years, long after the departure of leaders who dismissed it as 'a little flu'. Our initial anger

at this conflation of ignorance and miscalculation of risks has long since given way to a darkly cynical view of political priorities.

Faced with the threat of epidemic plague, the Italian courtier Niccolo Machiavelli [1] captured the physician's dilemma in what was then called a 'hectic fever'. He described a trade-off between the ease of diagnosis and treatment success; early diagnosis is a hard call but more likely to result in effective treatment. Half a millennium later, we ought to be able to cope better with an emerging infectious disease. But a glance at pre-hospital management of suspected COVID-19 reveals a vicious circle in which the under-protected pursue the under-detected in a frenzy of tracing and testing, with diminishing returns. Trust and touch have been trampled in a rush to find hidden pockets of a stealthy virus. The World Health Organization promoted laboratory testing to break the cycle of futility. But there are at least three good reasons why sophisticated laboratory technology cannot resolve Machiavelli's trade-off: (a) collection of a swab is not the same as a completed test, (b) tests that take more than a day to trigger action are not rapid and (c) a case definition that relies on a positive laboratory test is problematic in resource-poor settings. Suspension of clinical logic has been a recurrent theme in this pandemic; something we urgently need to restore if we want to improve individual patients' clinical management, public health controls and the development of novel countermeasures [2]. A cohesive argument for COVID's emergence that integrates clinical pathology, epidemiology,

Received 12 December 2020; Published 06 January 2021

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Keywords: COVID-19; SARS-CoV-2; pandemic; Hobbes's *Leviathan*; vaccine.

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pathophysiology and existing countermeasures might just help us bring forward enduring solutions.

Following in Machiavelli's footsteps, Thomas Hobbes realized that people would trade away their freedom for increased security when faced with a significant enough threat. Hobbes's masterpiece [3], *Leviathan*, was written during the English Civil War when Cromwell appointed himself Lord Protector over the English Commonwealth [4]. Hobbes dismissed the idea of a common good implied in the name of this upstart Commonwealth and risked universal opprobrium by calling out the nasty, brutish tendency of all people to look after their interests. As a realist in the mould of Machiavelli, Hobbes recognized that the only thing that would weld people together in troubled times was a guarantee of protection. This was the origin of our idea of a social contract. *Leviathan* is a powerful commentary on the COVID era.

The events that inspired *Leviathan* have been captured in Hobbes's posthumous work [4], *Behemoth*. Both his titles reveal a preoccupation with monstrous extremes of size and strength. Quite the opposite of a positive-sense singled-stranded RNA virus. The cover illustration on the original edition of *Leviathan* shows a crowned ruler emerging from a crowd of minuscule people; power personified rising out of the multitude. Set in our times, this is a vivid picture of a national leader who accumulates power during a coronavirus epidemic; or even the ultimate ascension of coronavirus to its throne. This figure is also a poignant reminder of coronavirus's ability to overwhelm our bodies, weaponize us, and turn us into a threat to our colleagues, friends and family. The virus's rise to power has torn at the fabric of our society and destroyed the implicit trust we rely on in our workplaces, from handshakes to handles, lift buttons to touchscreens. In *Leviathan* and its sequel, Hobbes describes a nation at war with itself, a self-serving parliament, political disregard for scholarship, the rise of a new citizen army and loss of public order, and he even mentions the toppling of statues and plague. You have to wonder whether Hobbes stumbled on something so fundamental to the human condition that it is hardwired into our behaviour in these pandemic times.

If *Leviathan* is a realist's prescription, *Behemoth* is his diagnosis. His pessimistic assessment of the human condition is that we are in a constant state of war. Hobbes would approve of our talk of the war on coronavirus and recognition that healthcare workers are at our front line. This information provides little comfort to exhausted medical, nursing and laboratory staff, who long for a break, let alone those who succumbed to infection in the line of duty. But it helps explain our readiness to seek support from the armed services. At the start of the year, only the most pessimistic predictions had troops on our streets by March. Since then, most developed countries have used military reinforcements to plug capability gaps and achieve a calming effect. Military teams have deployed to keep civilian hospitals running and have been operating temporary field hospitals. They have also been posted behind the scenes, where their experience provides critical disaster planning support to the civil authorities [5].

Through asserting soft power by embedding in civil government machinery, these military planners have brought decisive pragmatism to a confused, ambiguous and rapidly changing situation. If we read Hobbes correctly, statesmen who wish to cast themselves as protector-in-chief will use their troops to help, reassure and support civil authority to preserve life and limb. Only demagogues would send armed troops into the streets to assert their authority by suppressing unruly protesters. Granted, there is a fundamental difference between the refusal of a public health order in Melbourne and violent protests in Seattle. While we may understand the distinction, the coronavirus does not discriminate. It is blind to circumstance and stalks rowdy crowds irrespective of the cause.

Truth is one of the first victims of war. Clinical whistleblowers have called out official complacency and bureaucratic nonsense. These small victories have been applauded by those caught up in the turbulent current of pandemic response. Still, there are many more disconnects between those in power and their scientific advisors. How should we speak science to national leaders if those in power deride and discredit science when we so urgently need to steer our way through this pandemic? When trust and confidence in public science are in short supply, only a few steps from the fragmented logic of conspiracy theorists undermine evidence-based public health messages and stir up angry personal freedom protests. Freedom of belief, expression and association are values most of us hold to, even if we are quick to trade liberty for personal security. Surely there cannot be many who genuinely believe that these rights trump public health ordinances and the safety of our neighbours. *Leviathan* understands this obligation, elevating it beyond our freedom. Hobbes would understand our current predicament, where liberty is under sustained threat from an unseen adversary. Perhaps we will recognize an opportunity to establish greater purpose in our newfound freedom: not just freedom from, but liberty for, when we emerge from the current pandemic gloom.

There is a narrative thread running through this pandemic. The story has its heroes, a quest for treasure, and the villain is unmasked. The hero is our Protector. In the unending quest for political legitimacy, those who take on the mantle of Protector will be judged by their success in protecting health, jobs and borders. Those who undermine our biosecurity will be cast as villains. An ignominious fate awaits those who fail in the role of Protector, more so than the villains. So, the small government has shut up shop to be replaced by a topsy-turvy world of progressives striving for border security and neoconservatives doling out basic income, with both extending the long arm of acronym-encrusted government agencies. There are plenty of coronavirus deniers, some larger than life who threaten border controls, and leaders who are willing to risk public safety for the sake of media ratings. The biggest villain of all is the virus; a tiny particle that poked a sleeping bear; the virus that wears a crown. There is a treasure in sanitizer, gloves, gowns and masks,

quarantine, protective cordons and secure borders – the ways and means of protection.

The vaccine is the orb any would-be Protector wants to possess; his sceptre, effective antiviral therapy. So we are told that a vaccine will bring this pandemic to an end, though the early vaccine candidates appear to have less effect on transmission than on severe disease. At present, a swift end to the pandemic is wishful thinking. After this year of living cautiously, picking our way through a smorgasbord of choose-your-own truth, having a choice of vaccine will seem like a luxury. When the last shots have been fired, there will be a great roar of appreciation, and Leviathan will lie down with the lamb. Vaccine anyone?

Funding information

The author received no specific grant from any funding agency.

Conflicts of interest

The author declare that there are no conflicts of interest.

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