Book review

**Frank Snowden, *Epidemics and society – from the black death to the present*: The more things change, the more they stay the same, Yale**

*“……….. concept of the king’s touch to cure disease. King Charles II of England ……… administered the touch to nearly one hundred thousand people during the mid-1600s.”*[[1]](#endnote-1) In the 21st century, the touch of a godman can apparently make kidney stones come out of the mouth, not of the patient, but of the godman himself![[2]](#endnote-2) Past pandemics’ contribution - *“If disease is postulated as caused by gods, or demons, then scientific progress is impossible.”*

Historian Frank Snowden’s book, based on author’s lectures at Yale University, provides an excellent opportunity to compare Covid-19 with pandemics across two millennia, and to contextualize the similarities/differences of stakeholders’ responses.

In a captivating narrative, Snowden first equips us with basic understanding about diseases, puts us in a time capsule, and takes us back to visualize the horrors unfold - microbes plundering humans, humans plundering humans.

Demonstrating how pandemics were not “acts of god”, but a consequence of human action – *“every society produces its own specific vulnerabilities”*, asking probing questions, particularly with respect to 21st century *“dress rehearsals”* (SARS, Ebola), Snowden uses pandemics as mirrors for humanity.

Covid-19, occurring a year after he finished the book, confirms his worst fears about our susceptibility to *“sudden outbreaks of infectious diseases”,* putting to rest prevalent hubristic 20th century proclamations about the world being free of infections.

A digression here. Our institute, founded in the early 1960s, had visionary forefathers. For instance, foreseeing the future importance of drug development, pharmacology department had faculty positions for chemist, basic pharmacologist and clinical pharmacologist! On the other hand, they did not create a department of tropical medicine - was the belief about victory over microbes so widespread?

Snowden’s questions about factors affecting pandemic outcomes are vital – pathogen, morbidity, case fatality rate, symptoms, mode of transmission, age profile of victims. How states respond to pandemics is a question he does not ask. This is perhaps one of the few shortcomings of this brilliant book, although to be fair to Snowden he discusses this issue at length elsewhere in the book - *“Everywhere, major epidemics caught authorities unprepared, leading to confusion, chaos, ………..economic activity halted, shops closed, and employment ceased, increasing the threat of hunger and economic ruin.”*

We can appreciate this question with the wisdom of Covid-19 hindsight as we saw how world leaders often faltered, to the detriment of populations[[3]](#endnote-3) and science[[4]](#endnote-4)- creating leadership vacuum.[[5]](#endnote-5)

Public responses to pandemics were often severe - stigmatization, scapegoating, flight, mass hysteria, riots, religiosity, cult of saints, and witch-hunts. Scapegoating deserves special mention – foreigners, prostitutes, Jews, dissenters – were *“stoned, lynched, and burned”.* Snowden gives one particularly disturbing example of genocide when a British Army officer gave smallpox-infected-blankets to Native Americans *“to reduce them”.*

Strained relationships among humans and *“severely compromised standards of living that were ignored in more settled times”* were severe consequences of pandemics. Socioeconomic conditions, laissez-faire policies, neoliberalization, defunding of public health coupled with its privatization, and inequality, are recurring themes throughout. It is no coincidence that inequality, presently at the highest level ever (Picketty[[6]](#endnote-6)), is being extensively discussed.

Snowden even uses the almost prohibited-in-the-west ‘C’ word, *“What is the class profile of the sufferers”,* soon bringing Marx, “*philosopher for whom work and environment ……………. were all-important determinants of intellectual, spiritual, and physical health of laborers”.*

Besides poverty-related (cholera) and ‘democratic’ (influenza) diseases, there were ‘aristocratic’ (tuberculosis) illnesses, although tuberculosis soon became poverty-related disease. Such transition also occurred with Covid-19 – starting as democratic illness among market-goers, it became aristocratic (flyers), ultimately ending up affecting the impoverished to the greatest extent (US data).[[7]](#endnote-7) It would be interesting to compare similar data in relation to ‘clastoverty’ (class, caste, poverty) in India.

Snowden also explores the complex interplay of pandemics with war and ecological disasters, each positively feedbacking the other–the latter threatening existence as we enter a stage of irreversibility.[[8]](#endnote-8)

Science-optimists among us might have been fooled by WhatsApp messages at the start of Covid-19 about religious places closed while hospitals remained open. However, as the pandemic grew, science was backstaged on social media, with ideological superstructures ensuring predominance of (pseudo)remedies[[9]](#endnote-9) (Table 1), but Snowden tells us this is old story (“*upsurges in religiosity”*).

Pandemics caused *“intellectual disorientation, leaving people bewildered and frightened”*- depression, anxiety, substance use, suicides are higher during Covid.[[10]](#endnote-10)

Pandemics led to development of public strategies, often *“draconian in direct proportion to the magnitude of the perceived threat”*, but forming the basis of current approaches - quarantine, contact tracing, isolation, marking/sealing of victims’ houses. One problem with draconian measures was that people tended to hide their disease depriving the authorities of accurate data. This in turn led to states justifying *“control over the economy, ….. movement of people; ……. surveillance and forcible detention; ………… extinction of civil liberties”.*

Like during Covid-19, some governments instituted relief funds to compensate for lost wages, destruction of personal effects, funeral expenses, although we don’t their practical implementation.

Another old strategy - workforce recruitment (surgeons, physicians, barbers, contact-tracers, attendants, gravediggers) – remained largely unutilized in the neoliberal-era-pandemic even though unemployment grew and calls for radical solutions became more vocal.[[11]](#endnote-11)

Another parallel I wish to draw is the role of NGOs and international agencies working with profit-driven firms and being *“instruments of soft power to promote US hegemony”*. Filling the blanks, we have Rockefeller Foundation, UN, DuPont and Monsanto; the mid-1940s solution to malaria problem became synonymous with US technology and DDT, denigrating the need to address poverty and environment as promoting socialism. To appreciate this phenomenon, read “Winners Take All: The Elite Charade of Changing the World”.[[12]](#endnote-12)

Pharma industry comparisons are interesting too. When the results of the Salk polio vaccine were announced, pharma share prices surged, quite like today![[13]](#endnote-13) Still, there was not so much stress on patenting, profit-making wasn’t the sole/primary objective, the politician-pharma nexus was yet underdeveloped. Pharma today relies on the government funds[[14]](#endnote-14) for research,[[15]](#endnote-15) pocketing the profits,[[16]](#endnote-16) at the expense of society. Snowden is not scared to bring back Marx, who predicted, *“need of a constantly expanding market to nestle everywhere, settle everywhere, establish connections everywhere”* will have adverse outcomes.

Scientists’ response to the current pandemic differs somewhat from the past – oversaturation of therapeutics, rush to publish (I got >62,000 results on PubMed with keyword Covid-19), necessitating calls to flatten this curve.[[17]](#endnote-17) We had Journal of the Plague Year then, we now have Coronaviruses, an open-access journal.

Although it is hard to find major omissions in the book, I would like to mention one – in the cholera story - Shambhu Nath De’s discovery of cholera toxin, key to our understanding of the disease and its treatment, and for which many believed he should have got the Nobel.

It tempting to include other aspects - antivaxxers, violence against healthcare workers, woes of non-pandemic-disease-affected patients, conspiratology, pharma greed[[18]](#endnote-18), slavery, fascism, racism, altitude therapy (think hill stations), child labor[[19]](#endnote-19); but that would take up the whole issue of IJME.

Zizek, psychoanalyst-philosopher writes in ‘[Pandemic!: COVID-19 Shakes the World](https://www.goodreads.com/work/quotes/78482814)’, *“Hegel wrote that the only thing we can learn from history is that we learn nothing from history, so I doubt the epidemic will make us any wiser.”[[20]](#endnote-20)* If Snowden writes post-Covid edition, he will find he has little to add, we repeated the past mistakes.

To teachers, the book provides many one-line-answer-questions (Table 2).

It is a book about politics, wars, arts, and societies, interwoven in a complex network, under the shadow of pandemics.

Above all it is a history of today.

I will end with two quotes from the book:

*“One of the bitterest ironies of the 2013–2016 crisis is that the expense of combatting the epidemic is estimated to be threefold the cost of setting up a functioning health infrastructure. Such an infrastructure perhaps could have prevented the outburst altogether while providing access to care for other afflictions. Emergency response to contain a conflagration already under way is expensive, inefficient, and inhumane.”*

*“In the ancient but pertinent wisdom, salus populi suprema lex esto—public health must be the highest law—and it must override the laws of the marketplace.”*

Table 1. Historically and currently used (pseudo)cures during pandemics (in no particular order), which led Sydenham to say that the best physician was the one who did the least.

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| ‘Treatments’ of the past (from the book) | ‘Treatments’ during Covid-19 (from various sources) |
| Quinine  Emetics, purgatives  Atropine  Morphine, opium  Theriac (mixture of opium, cinnamon, gum arabic, agarics, iris, lavender, rapeseed, fennel, juniper, honey, flesh of a viper)  Endive, figwort, burdock, rose, chamomile, daffodil, rhubarb, ground pearl, flax, and vinegar  Strychnia  Anti-inflammatory diets Lemon-flavored water  Buglewood tea  Venesection  artificial pneumothorax  Exorcism  Appeasement of gods  Astrology, numerology (number 4)  Precious stones (rubies, diamonds)  Fire and smoke  Aromatic agents (pinewood or sulfur)  Firing of cannon  Dry-cup buboes, hot compresses  Acid enema  Cool flannels  Tepid baths  Plague costumes  Quarantine | Remdesivir, other antivirals  Chloroquine(hydroxy)  Doxycycline, ivermectin, azithromycin  Colchicine  Kwath or kadha (holy basil, stem bark of cinnamon, ginger, black pepper)  Ayush protocol (a*shwagandha*, *guduchi*, *pippali* turmeric milk)  Medicated oils and steam inhalation with *ajwain* or eucalyptus oil  Drinking lemon in warm water  Fennel tea  Arsenicum album-30  Neem leaves  Juice of bitter gourd  Plasma therapy  Methylene chloride, chlorine dioxide  Beating of utensils  Cow urine, dung, camel urine  Yoga  Touching televisions  Spiritual vaccines  Pendants  Silver solution  Energy Platform device  Industrial bleach  PPE  Quarantine |

Table 2. Interesting one-liners for teachers.

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| * Malaria was known as the “Italian national disease”. * Duration of the quarantine (meaning forty) was based onChristian Scripture (purification, flood in Genesis, Israelites wandering for 40 years, days Moses spent on Mount Sinai before receiving the Ten Commandments, forty days Christ stayed with his disciples after his resurrection) * “Columbian exchange”refers to transfer of potato, maize, and quinine bark from Americas to Europe, and microbes in the reverse direction. * “Misery thermometer” was an indicator of societal neglect and substandard living conditions. * A resource-poor country regularly sending aid (trained doctors, nurses) to other nations - Cuba * In most Ebola outbreaks, the index cases were traced to deforestation. * Tuberculosis was known to increase creativity and beauty among sufferers. * Tuberculosis death rates in Germany in the early 20th century were inversely proportional to the amount of income tax paid * Atomic bomb of the insects - DDT |

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