

Pandemics and the Longue Durée

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COVID-19 compelled inquiry. Reading, research and writing can be therapeutic – escape by immersion. In 1894 Alexandre Yersin researching in Hong Kong linked plague, rats, and fleas -- *Yersinia pestis*. In 1943 the antibiotic Streptomycin was prescribed for plague. In 2015 geneticists identified *Yersinia pestis* DNA on the teeth of a twenty-year-old female skeleton in a 5,000-year-old Bronze Age tomb in Sweden.¹

In the late 1950s I read Giovanni Boccaccio’s 1353 Black Death novel *Decameron*. Ten years later I read Philip D. Curtin’s *The Atlantic Slave Trade, A Census* (1969), an exploration of statistical variability of enslaved people brought to America, with estimates ranging from 3.5 to 25 million. Curtin assisted by computers concluded 9,566,000.² I edited “International Historical Statistics” for G.K. Hall in the early 1980s. Numerical revisions, as we will see, are a feature of pandemic history.

Reading list: William H. McNeill’s *Plagues and Peoples* (1976), John M. Barry, *The Great Influenza: The Epic Story of the Deadliest Plague in History* (2004), two of John Aberth’s nine books, *The Black Death*, *The Great Mortality of 1348-1350* (2005), *Plagues in World History* (2011), and *The Terror of History, on the Uncertainties of Life in Western Civilization* (2011) by Teofilo F. Ruiz.³ There are several perceptive novels about the Black Death, 1665 Great Plague of London and the 1918 Influenza.

Plagues, epidemics, and pandemics challenged medical knowledge, record keeping, communications, transport, and food supply. The term “pandemic,” initially applied to the three *Yersinia pestis* plagues, now also applies to the 1918 influenza, HIV and COVID-19.

It took 200,000 years for the world’s population to reach a billion people in 1800, 100 years to reach 1.6 billion in 1900, and 120 years to attain 7.8 billion in 2020. Disease, famine, war, infant mortality, life expectancy, and nutrition restrained growth. Agricultural mechanization, irrigation, fertilizers, pesticides, herbicides, the green revolution and other innovations increased food security and encouraged population growth.

¹ Simon Rasmussen, *et. al.*, “Early Divergent Strains of *Yersinia pestis* in Eurasia 5,000 Years Ago,” *Cell*, 163 (October 15, 2015).

² Philip D. Curtin, *The Atlantic Slave Trade, A Census* (Madison: Univ of Wisconsin Press, 1969).

³ John Aberth’s *The Black Death, A New History of the Great Mortality 1347-1500* (Oxford, OUP, 2020) and *Doctoring the Black Death, Europe’s Late Medieval Medical Response to Epidemic Disease* (Oxford, forthcoming 2021) were not available to me.

Natural and Manmade Population Catastrophes				
Mortalities in excess of one million				
Event	Location	Time	Mortality	World Population
Covid-19	World	11/30/2020	1.47 million	7.8 billion
	USA	11/30/2020	273,000	
HIV	World	2005-2012	36 million	
	World	2000		6.1 billion
Flu	World	1968	1 million	
	World	1960		3 billion
Asian Flu		1956-1958	2 million	
	World	1950		2.6 billion
<i>World War II</i>		1940-1945	70-85 mill	
<i>Holocaust</i>		1939-1945	6 million	
	World	1940		2.3 billion
Spanish Flu		1918-1920	50-100 mill	
	World	1920		1.86 billion
<i>World War I</i>		1914-1918	15-19 mill	
	World	1900		1.6 billion
3rd Pandemic	Asia	1894-1930	12 million	
Flu		1889-1890	1 million	
3rd cholera		1852-1860	1 million	
	World	1800		1 billion
Great Plague	London	1665	100,000	
	World	1400		390 million
2nd Pandemic - Black Death	1/3 of Europe	1346-1353	75-200 million	
	World	1300		392-431 million
1st Pandemic	Constantinople	541-750	25-100 mill	
Antonine Plague		165	5 million	
	World	200 BCE		150 million

Exodus, Pharaoh, Pestilence – ca 1300 BCE

Four of the ten plagues in Exodus look like *Yersinia pestis*. Pestilence, boils, buboes, swelling of lymph nodes in the groin, first born – rapid mortality. God punished Pharaoh to aid his people the Hebrews. Who wrote Exodus? – Moses or 6th century BCE Babylonian exile writers. It has been suggested that Egypt “afforded unique facilities” for plague “since its agricultural interests foster rats and its semi-arid conditions favor fleas.”⁴

⁴ Charles A. Kofoid, review of A. W. Wakil, *The Third Pandemic of Plague in Egypt*, *Isis* (June 1935): 297.

First Pandemic – Plague of Justinian 541-750

From 541-42 CE, 25 to 100 million died. Constantinople had 500,000 inhabitants, 40 per cent died. The pandemic killed between a third and half the population of Eurasia. There were recurrences to 750.

Emperor Justinian reigned in Constantinople from 527 to 565. His historian Procopius, wrote in *History of the Wars* about near annihilation, fever, mass hysteria, heroic physicians and care takers, compassion, dying for lack of care, speech impediment after-effects, breakdown of burials, detailing soldiers to distribute money, political factions, the healthy secluding themselves in their homes, “all trades were abandoned by artisans,” and “starvation was running riot.”⁵ Accounts of contagion, transmission, treatment, mortality, and food supply would be voiced in later pandemics.

Numerical revisions. A 2019 study using multidisciplinary analysis downgrades the mortality to substantially less.⁶

Black Death, 1346-53 - Giovanni Boccaccio, *The Decameron* - The Great Mortality

Deaths during the Black Death were regionally between 30 and 60 per cent. Alfred W. Crosby observes “with the eruption of the Black Death in the mid-1300s, Europe’s population crashed by one-third and continued to fall well into the next century, with city population probably shrinking faster than rural.”⁷

In 1338 Florence had 110,000-120,000 inhabitants. In 1351 50,000 remained. From 1350 through the 1400s the Black Death revisited about every decade.

Boccaccio’s *Decameron* depicts seven young women and three men fleeing the Black Death in Florence. They tell 100 saucy irreverent stories in ten days. The novel and the commentary, a product of crisis and imagination, were written during the plague.⁸

Boccaccio wrote of melancholy, contagion or divine will, unprecedented burial demands: “I say, then, that the years [of the era] of the fruitful Incarnation of the Son of God had attained to the number of one thousand three hundred and forty-eight, when into the notable city of Florence, fair over every other of Italy, there came the death-dealing pestilence, which, through the operation of the heavenly bodies or of our own iniquitous

⁵ Fordham University Center for Medieval Studies, Sourcebook: Procopius: The Plague, 542,” online.

⁶ “The Justinianic Plague: An inconsequential pandemic?” first published December 2, 2019, Lee Mordechai, Merle Eisenberg, Timothy P. Newfield, Adam Izdebski, Janet E. Kay and Hendrik Poinar, and see also “Rejecting Catastrophe: The Case of the Justinianic Plague,” by Lee Mordechai and Merle Eisenberg, *Past & Present*, July 2019, 3-50.

⁷ Alfred W. Crosby, *The Measure of Reality, Quantification and Western Society, 1250-1600* (Cambridge: Cambridge Univ Press, 1997), 50. See also Donald G. McNeil, Jr., *New York Times* science and health reporter, “To Take on the Coronavirus, Go Medieval on It,” *NYT*, February 28, 2020.

⁸ See Giovanni Boccaccio, *The Decameron*, translated by Richard Aldington (Garden City, NY: Garden City Books, 1949).

dealings, being sent down upon mankind for our correction by the just wrath of God, had some years before appeared in the parts of the East...had now unhappily spread towards the West."

Sanitation:

"Orders had been given to cleanse the city of filth."

Carrying flowers or scented herbs to comfort the brain with such odours

Allay the smell of dead bodies

"They washed their hands" (face and mouth with vinegar in the hopes of preventing infection)

"An enormous number of ignorant men and women set up as doctors in addition to those that were trained." Quacks and flagellants

Social Distancing:

Cruel policy – avoid the sick; Shut themselves in houses

"One citizen avoided another, hardly any neighbor troubled about others, relatives never or hardly ever visited each other"

abandonment of sick spouses, parents and children, siblings

preservation - "Abandonment in which the sick were left by the cowardice of the healthy."

Flee, stay, shun, isolate, shelter in place, special clothing, quarantine

Civil Authority:

"In this suffering and misery of our city, the authority of human and divine laws almost disappeared..."

"Every man was therefore able to do as he pleased."

"deriding authority because they knew the guardians of the law were sick or dead"

"The laws are now strict again"

looser morals in those women that survived

"The plight of the lower and most the middle classes was even more pitiful to behold."

The "other," and newcomers suffer the brunt of xenophobia. Medieval Jewish communities were the subject of scapegoating, being demonized, persecuted and murdered for causing the plague, poisoning wells, etc. Various sources state 60, 200 to 1000 communities were attacked.⁹

Numerical revisions. Black Death estimate in the 1950's for the Low Countries was "a complete fallacy." By ceasing "overprivileging of particular urban sources" "which obscured demographic decimation" the Low Countries experience was "perhaps no less severe than other parts of Western Europe."¹⁰

⁹ Donald G. McNeil, Jr., "Finding a Scapegoat When Epidemics Strike," *NYT* September 1, 2009.

¹⁰ Joris Roosen and Daniel R. Curtis, "The 'Light Touch' of the Black Death in the Southern Netherlands: an urban trick?," *Economic History Review* (2019).

Encyclopaedia Britannica (1768-1771) - The Enlightenment

The Black Death visited England in 1349 and at least seven more times until The Great Plague of London 1665. Perhaps 100,000 people died in 18 months. England was plague free after 1666.¹¹

The three volume *Encyclopaedia Britannica* (1768-1771) published about 100 years after the Great Plague of London, devoted 25% of its pages to anatomy, medicine, midwifery, and surgery. Perhaps *Encyclopaedia* editors read Procopius and Boccaccio. Familiar considerations include quarantining, social distancing, masking, fleeing until the disease is under control, and gratitude for health care.

Pestilence was described as “poisonous miasma, brought from eastern countries.” It is “not a native of our country... the best preservative is to fly to a distant country...those princes best consult the welfare of their subjects, who in the time of the plague endeavor to prevent the spreading of the infection...when a family is afflicted, separate the well from the sick, and burn all their movables...Those who are obliged to be near the sick, must take care that the miasma do not approach their vital juices nor yet the saliva. To this purpose, frequent spitting, and washing the mouth with vinegar, or wine, or snuffing them up the nose, are useful...Plague sufferers should be fed special foods – “But above all, acids are highly praised, such as juice of citrons, Seville oranges, lemons, vinegar, etc, which resists poison, putrefaction, and prevent the dissolution of the blood” – which sounds like Vitamin C scurvy treatment formulated in the 1750s.

Third Pandemic - Plague - 1855 active until 1960

Ten million deaths in India and two million in China. In 1894 bacteriologist Alexandre Yersin discovered *Yersinia pestis*.

1918 Spanish Flu

In 1920 the U.S. population was 106 million. Deaths from the 1918 influenza pandemic amounted to about 675,000 in America.

On September 30, 1919, Sam L. Rogers Director of the Census wrote to William C. Redfield the Secretary of Commerce informing him that from September 1 to December 31, 1918 an estimated 445,000 Americans died from the influenza epidemic. The authors in 1920 were still collecting evidence. “The epidemic did not end until well into the year 1919, but it has not been found feasible to present at this time any data relating to that year.”¹²

Numerical revisions. Global mortality has been updated at least three times: 1920s, 21.5 million; 1991, 24.7 to 39.3 million; and in Johnson and Mueller including “excess mortality”

¹¹ Andrew B. Appleby, “The Disappearance of Plague: A Continuing Puzzle,” *The Economic History Review*, (May 1980).

¹² *Special Tables of Mortality from Influenza and Pneumonia in Indiana, Kansas, and Philadelphia, PA.* (Washington: Government Printing Office, 1920), 7.

suggest 50 million with the caveat “that even this vast figure may be substantially lower than the real toll, perhaps as much as 100 percent understated.” There were probably three waves. The 445,000 four-month American death toll noted above were part of the second wave that “scorched its way around the globe.”¹³

Conclusion

By the end of November 2020, the Covid-19 had claimed about 273,000 American lives. Historians writing the Covid-19 history will contend with masses of information, uncertainty, upending and reconfiguration. Discord between leaders, confusion, and anti-social behavior existed in earlier pandemics. Science, healthcare, living conditions, nutrition, education, communication and lower pathogen lethality mitigated COVID mortality. The reactions of stubborn individualism, human nature, mask phobia, dislike of government regulation and a sense of privileged immunity echoed earlier pandemics.

Zooming, education, print culture
Unemployment, poverty, income inequality, eviction and homelessness,
Economic retraction, decline of traditional retail, recovery
Work at home office or office building
Racial, immigrant, generation, and class divide
Health care preparedness and vaccine
Limits to empathy, compassion, and expectations?
How can the richest country in the world be so stricken?
Continuing threats: exploiting natural resources, pollution, and global warming.
We await the new normal.

The author. Oliver B. Pollak was born to refugees from Germany and Austria in England in 1943. The family emigrated to America in 1952. During the mid 1960s he served in the U.S. Navy. He earned his BA at California State University, Los Angeles, a PhD in History at UCLA and a law degree from Creighton University. He taught at the University of Zimbabwe in the early 1970s and at the University of Nebraska at Omaha from 1974 to 2012 and practiced law. He is the author of twelve books, several hundred scholarly and popular articles and is a correspondent for the online San Diego Jewish World. He cofounded the Nebraska Jewish Historical Society and is a member of the Institute for Historical Study. His interests include print culture, legal history, food history, biography, higher education, American Jewish History, Myanmar, and Zimbabwe. Oliver and Karen retired to Richmond, California, in 2016.

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¹³ Niall P. A. S. Johnson and Juergen Mueller, “Updating the Accounts:” Global Mortality of the 1918-1920 ‘Spanish’ Influenza Pandemic,” The Johns Hopkins University Press, *Bulletin of the History of Medicine* (Spring 2002): 105, 107.