INTRODUCTION

An epidemic is defined as an outbreak of a disease that affects many individuals at once and spreads rapidly. Moreover, an outbreak is defined as a sudden, often unexpected escalation in the number of instances of a disease. An outbreak can occur in a particular community, geographical location, or across a multitude of countries. On the other hand, a pandemic is a type of epidemic. However, when speaking in terms of a pandemic vs epidemic, the former term is used to describe a disease that affects an entire nation or even the world at large. Therefore, the difference between pandemic and epidemic is that while an epidemic may affect just one or a few areas, a pandemic affects the entire world.

Understandingly, a pandemic is an epidemic of disease that has spread across a large region, for instance multiple continents or worldwide, affecting a substantial number of people. Throughout history, there have been a number of pandemics of diseases such as smallpox and tuberculosis and those associated with influenza and plague have been devastating.

Some of the highly devastating pandemics hitting the globe include

A. The ‘Antonine Plague’, sometimes referred to as the ‘Plague of Galen’, erupted in 165 CE, at the height of Roman power throughout the Mediterranean world during the reign of the last of the Five Good Emperors, Marcus Aurelius Antoninus (161-180 CE). The first phase of the outbreak would last until 180 CE affecting the entirety of the Roman Empire, while a second outbreak occurred in 251-266 CE, compounding the effects of the earlier outbreak. It has been suggested by some historians that the plague represents a useful starting point for understanding the beginning of the decline of the Roman Empire in the West but also the underpinning to its ultimate fall.

Among the more common symptoms were fever, diarrhea, vomiting, thirstiness, swollen throat, and coughing. The diarrhea appeared blackish which suggested gastrointestinal bleeding. The coughing produced a foul odor on the breath and an exanthema, skin eruptions or rash, over the entirety of the body distinguished by red and black papules or eruptions. Those infected suffered from the illness for roughly two weeks. Not all who caught the disease died, and those who survived developed immunity from further outbreaks. The epidemic most likely emerged in China shortly before 166 CE spreading westward along the Silk Road and by trading ships headed for Rome. The total deaths have been estimated at 5 million, and the disease killed as much as one third of the population in some areas and devastated the Roman army. Two different legends arose discussing the exact origins of how the plague was released into the human population but more recently, researchers and historians, such as A. E. R. Boak, suggest that the Antonine Plague, along with a series of other outbreaks, represents a useful starting point for understanding the beginning of the decline of the Roman Empire in the West (Horgan, 2019).

B. There have been numerous plagues throughout human history that managed to kill an innumerable amount of people within a short span of time. The ‘Justinian Plague’ was one of the deadliest plagues in known history, with millions of fatalities. The Justinian Plague, which began in AD 541, may have started in Egypt and was carried to other continents by merchant ships infested with disease-carrying rodents. When the plague reached Constantinople, it killed roughly 300,000 people there in the first year. The plague got its name from the Byzantine emperor Justinian, who reigned from AD 527 to 565. Just as Emperor Justinian was trying to rebuild his empire to the glory of ancient Rome, the plague struck and left it devastated. The Justinian Plague killed up to 100 million people across Europe, Asia, Arabia, and North Africa in 50 years. In Constantinople, over 5,000 people were dying from the plague each day during the height of the pandemic. It became more and more difficult for families to bury the dead. Justinian eventually had to appoint court officials to dispose of the dead. Still, there were just too many plague victims to care for, and they were left to rot in the streets. Tombs filled up...
quickly, and the officials had to get creative. Trenches were dug, and bodies were given mass burials. Some of the bodies were loaded onto death boats. They were taken out to sea and dumped overboard, only to wash up on shore again. Other bodies were dumped into fortified towers, which were then closed up at the top.

Because the plague acted so quickly, people started putting on name tags before leaving their homes. Worn on the arm, they were the only way to ensure proper identification if they were struck by the plague and died away from home. With so many people dying each and every day, trade came to a complete standstill. People starved, and those who might have been able to pull through the plague had no food or caretakers to help them overcome the sickness. It was a vicious cycle of suffering and death (Plague of Justinian, 2014, The Justinian Plague, 2016).

C. The disastrous mortal disease known as the ‘Black Death’ spread across Europe in the years 1346-53. In the course of just a few months, 60 per cent of Florence’s population died from the plague, and probably the same proportion in Siena. The Black Death was an epidemic of bubonic plague, a disease caused by the bacterium *Yersinia pestis*. Plague among humans arises when rodents in human habitation, normally black rats, become infected. From the bite site, the contagion drains to a lymph node that consequently swells to form a painful bubo, most often in the groin, on the thigh, in an armpit or on the neck and hence the name ‘bubonic plague’. The epidemic in fact began with an attack that the Mongols launched on the Italian merchants’ last trading station in the region, Kaffa (today Feodosiya) in the Crimea. The data is sufficiently widespread and numerous to make it likely that the Black Death swept away around 60 per cent of Europe’s population. It is generally assumed that the size of Europe’s population at the time was around 80 million. This implies that that around 50 million people died in the Black Death. Iceland and Finland were the only regions that avoided the Black Death because they had tiny populations with minimal contact abroad. This plague killed 50 to 200 million Europeans (Benedictow, 2005).

D. The ‘Third Cholera pandemic’ is generally considered to have been one of the most deadliest. It is thought to have erupted in 1852 in India; from there it spread rapidly through Persia (Iran) to Europe, the United States, and then the rest of the world. Africa was severely affected, with the disease spreading from its eastern coast into Ethiopia and Uganda. Perhaps the worst single year of cholera was 1854; 23,000 died in Great Britain alone (Cholera, 2020; Cholera through history, 2020).

E. The ‘Sixth Cholera pandemic’ lasted from 1899 to 1923 and was especially lethal in India, where it killed more than 800,000 people, and spreading to the Middle East, North Africa, Eastern Europe and Russia. More than 34,000 people perished in Egypt in a three-month period, and some 4,000 Muslim pilgrims were estimated to have died in Mecca in 1902. Russia was also struck severely by the sixth pandemic, with more than 500,000 people dying of cholera during the first quarter of the 20th century. The pandemic failed to reach the Americas and caused only small outbreaks in some parts of western Europe. Even so, extensive areas of Italy, Greece, Turkey, and the Balkans were severely affected. After 1923 cholera receded from most of the world, though endemic cases continued in the Indian subcontinent, but the pandemic failed to reach America and caused only small outbreaks in some parts of Western Europe. Even so, extensive areas of Italy, Greece, Turkey, and the Balkans were severely affected (Cholera, 2020; Cholera through history, 2020).

F. The Global HIV/AIDS Pandemic, 2006- Since the first cases of acquired immunodeficiency syndrome (AIDS) reported in 1981, infection with human immunodeficiency virus (HIV) has grown to pandemic proportions, resulting in an estimated 65 million infections and 36 million deaths. During 2005 alone, an estimated 2.8 million persons died from AIDS, 4.1 million were newly infected with HIV, and 38.6 million were living with HIV. HIV continues to disproportionately affect certain geographic regions (e.g., sub-Saharan Africa and the Caribbean) and subpopulations (e.g., women in sub-Saharan Africa, men who have sex with men, injection-drug users, and sex workers). Approximately 10% of the world population lives in sub-Saharan Africa, but the region is home to approximately 64% of the world population living with HIV. Adult HIV prevalence is lower in Asian countries than in countries in sub-Saharan Africa, and the pandemic in most Asian countries is attributable primarily to various high-risk behaviors (e.g., unprotected sexual intercourse with sex workers, IDUs, or MSM and injection-drug use). Of the 8.3 million HIV-infected persons in Asia, 5.7 million live in India. In the United States, recent evidence suggests a resurgence of HIV transmission among MSM; during 2001–2004, an estimated 44% of new HIV infections were in MSM, and 17% were in IDUs. In addition, blacks and Hispanics together account for 69% of all reported HIV/AIDS cases (HIV/AIDS Pandemic, 2006).

The various influenza pandemics are as follows

G. The 1889–1890 flu pandemic, better known as the "Asiatic flu" or "Russian flu", was a deadly influenza pandemic. It was the last great pandemic of the 19th century. For some time the virus strain responsible was conjectured to be Influenza A virus subtype H2N2. More recently, the strain was asserted to be Influenza A virus subtype H3N8. It resulted in high death toll in Berlin, Brussels, Lisbon, London, Paris, Prague, Vienna and other cities. The total U.S. death toll was just under 13,000, according to the U.S. Census Office, out of about 1 million worldwide (Daugherty, 2020).

H. In 1918, a strain of influenza known as ‘Spanish flu’ caused a global pandemic, spreading rapidly and killing indiscriminately. Spain was one of the earliest countries where the epidemic was identified. Young, old, sick and otherwise-healthy people all became infected, and at least 10% of patients died. Estimates vary on the exact number of deaths caused by the disease, but it is thought to have infected a third of the world's population and killed at least 50 million people, making it as one of the deadliest pandemic in modern history. This was a direct result of weakened immune systems from malnourishment. In 2014, a new theory about the origins of the virus suggested that it first emerged in China. Previously undiscovered records linked the flu to the transportation of Chinese laborers, the Chinese Labour Corps, across Canada in 1917 and 1918. Initial symptoms of the illness included a sore head and tiredness, followed by a dry, hacking cough; a loss of
appetite; stomach problems; and then, on the second day, excessive sweating. Next, the illness could affect the respiratory organs, and pneumonia could develop. The epidemic had rapidly become a pandemic, making it way around the world. Many physicians urged people to avoid crowded places or simply other people. Americans were offered similar advice about how to avoid getting infected. They were advised not to shake hands with others, to stay indoors, to avoid touching library books and to wear masks. Schools and theaters closed, and the New York City Department of Health strictly enforced a Sanitary Code amendment that made spitting in the streets illegal. Schools and other buildings became makeshift hospitals, and medical students had to take the place of doctors in some instances. As many as 50 million people died from the virus, though the true figure is thought to be even higher. Bristow estimates that the virus infected as much as 25% of the U.S. population, and among members of the U.S. Navy, this number reached up to 40%, possibly due to the conditions of serving at sea. The flu had killed 200,000 Americans by the end of October 1918, and Bristow claims that the pandemic killed over 675,000 Americans in total. The impact on the population was so severe that in 1918, American life expectancy was reduced by 12 years. Bodies piled up to such an extent that cemeteries were overwhelmed and families had to dig graves for their relatives. The pandemic spread to Asia, Africa, South America and the South Pacific. In India, the mortality rate reached 50 deaths per 1,000 people — a shocking figure. The Spanish flu remains the most deadly flu pandemic to date by a long shot, having killed an estimated 1% to 3% of the world’s population (Spanish flu, 2020).

I. ‘1957 Flu pandemic’, also called ‘Asian flu pandemic of 1957’ or ‘Asian flu of 1957’, outbreak of influenza that was first identified in East Asia and that subsequently spread to countries worldwide. The 1957 outbreak was caused by a virus known as influenza A subtype H2N2. In the first months of the 1957 flu pandemic, the virus spread throughout China and surrounding regions. By midsummer it reached the United States. The pandemic was also widespread in the United Kingdom. This flu outbreak caused an estimated one million to two million deaths worldwide (Rogers, 2020).

J. ‘1968 flu pandemic’, also called ‘Hong Kong flu pandemic of 1968’ or ‘Hong Kong flu of 1968’, global outbreak of influenza originated in China. The outbreak was the third influenza pandemic to occur in the 20th century; this pandemic resulted in an estimated one million to four million deaths, far fewer than the 1918–19 pandemic, which caused between 25 million and 50 million deaths. The 1968 pandemic was initiated by the emergence of a virus known as influenza A subtype H3N2. It is suspected that this virus evolved from the strain of influenza that caused the 1957 pandemic. The 1957 pandemic flu virus, or influenza A subtype H2N2, is thought to have given rise to H3N2 through a process called antigenic shift. Because the new virus retained the neuraminidase (N) antigen N2, persons who had been exposed to the 1957 virus apparently retained immune protection against the 1968 virus. This would explain the mildness of the 1968 outbreak relative to the pandemic of 1918–19. Although the 1968 flu outbreak was associated with comparatively few deaths worldwide, the virus was highly contagious, a factor that facilitated its rapid global dissemination. Indeed, within two weeks of its emergence in Hong Kong, some 500,000 cases of illness had been reported, and the virus proceeded to spread swiftly throughout Southeast Asia. Within several months it had reached the Panama Canal Zone and the United States, where it had been taken overseas by soldiers returning to California from Vietnam and spreading throughout the United States, the United Kingdom and countries in western Europe. Australia, Japan, and multiple countries in Africa, eastern Europe, and Central and South America (Rogers, 2020).

K. H1N1/09 flu pandemic- A flu pandemic occurred in 2009 to 2010, after a new form of the H1N1 influenza strain was identified. The disease was named the “Swine flu” because the virus that causes it is similar to one found in pigs (not because the virus came from pigs). H1N1 infection was first recognized in the state of Veracruz, Mexico from where it spread to different countries. The swine flu caused respiratory illnesses that killed an estimated 151,700-575,400 people worldwide in the first year, according to the Centers for Disease Prevention and Control. That was about 0.001% to 0.007% of the world’s population, so this pandemic was much less impactful than the 1918 Spanish flu pandemic. About 80% of the deaths caused by swine flu occurred in people younger than 65, which was unusual. Typically, 70% to 90% of deaths caused by seasonal influenza are in people older than 65. Experts, including the WHO, have since agreed that an estimated 284,500 people were killed by the disease, about 15 times the number of deaths in the initial death toll (Outbreak, 2020).

L. The most recent ‘Corona virus pandemic’- The 2019–20 ‘Corona virus’ pandemic is an ongoing pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). The outbreak was identified in Wuhan, China, in December 2019. The World Health Organization declared the outbreak to be a Public Health Emergency of International Concern on 30 January 2020, and recognized it as a pandemic on 11 March 2020. The virus is primarily spread between people during close contact, often via small droplets produced by coughing, sneezing, or talking. The droplets usually fall to the ground or onto surfaces rather than remaining in the air over long distances. People may also become infected by touching a contaminated surface and then touching their face. In experimental settings, the virus may survive on surfaces for up to 72 hours. It is most contagious during the first three days after the onset of symptoms, although spread may be possible before symptoms appear and in later stages of the disease. Common symptoms include fever, cough and shortness of breath. Complications may include pneumonia and acute respiratory distress syndrome. The time from exposure to onset of symptoms is typically around five days, but may range from two to fourteen days. There is no known vaccine or specific antiviral treatment. Primary treatment is symptomatic and supportive therapy.

Health authorities in Wuhan, Hubei, China, reported a cluster of viral pneumonia cases of unknown cause on 31 December 2019, and an investigation was launched in early January 2020. The virus is thought to have a zoonotic origin. The virus that caused the outbreak is known as SARS-CoV-2, a newly discovered virus closely related to bat corona viruses, pangolin corona viruses, and SARS-CoV. The current scientific consensus is that COVID-19 has a natural origin. Most people
who contract COVID-19 recover. For those who do not, the time between the onset of symptoms and death ranges between 6 and 41 days, typically about 14 days. As of 26 April 2020, more than 2.89 million cases of COVID-19 have been reported in 185 countries and territories, resulting in more than 203,000 deaths already and is expected to go still further. More than 822,000 people have recovered till date. In the worst affected areas, mortality has been seen several times higher than average. In New York City, deaths have been four times higher than average, in Paris twice as high, and in many European countries deaths have been on average 20 to 30 per cent higher than normal. The death-to-case ratio reflects the number of deaths attributed to COVID-19 divided by the number of diagnosed cases within a given time interval. Based on Johns Hopkins University statistics, the global death-to-case ratio is 7.0 per cent (203,044 deaths for 2,899,830 cases) as of 26 April 2020 (Coronavirus pandemic, 2020)

An influenza pandemic is an epidemic of an influenza virus that spreads on a worldwide scale and infects a large proportion of the world population. These pandemics have been observed to occur irregularly, and there have been a number of influenza pandemics. Ten pandemics were recorded before the Spanish flu of 1918. Three influenza pandemics occurred during the 20th century and killed tens of millions of people. Some pandemics are relatively minor such as the one in 1957 called "Asian flu" (1–4 million dead, depending on source). Others have a higher Pandemic Severity Index whose severity warrants more comprehensive social isolation measures.

The 1918 pandemic killed tens of millions and sickened hundreds of millions; the loss of this many people in the population caused upheaval and psychological damage to many people. There were not enough doctors, hospital rooms, or medical supplies for the living as they contracted the disease. Dead bodies were often left unburied as few people were available to deal with them. There can be great social disruption as well as a sense of fear. Efforts to deal with pandemics can leave a great deal to be desired because of human selfishness, lack of trust, illegal behavior, and ignorance. For example, in the 1918 pandemic: "This horrific disconnect between reassurances and reality destroyed the credibility of those in authority. People felt they had no one to turn to, no one to rely on, no one to trust" (Influenza pandemic 2020).

Pandemics can cause high levels of mortality. Influenza pandemics occur when a new strain of the influenza virus is transmitted to humans from another animal species. Species that are thought to be important in the emergence of new human strains are pigs, chickens and ducks. These novel strains are unaffected by any immunity people may have to older human strains are pigs, chickens and ducks. These novel strains from wild birds to other species, causing outbreaks in domestic poultry, and may give rise to human influenza pandemics. The propagation of influenza viruses throughout the world is thought in part to be by bird migrations, though commercial shipments of live bird products might also be implicated, as well as human travel patterns. Influenza is caused by an RNA virus of the family Orthomyxoviridae (the influenza viruses). In humans, common symptoms of influenza infection are fever, sore throat, muscle pains, severe headache, coughing, and weakness and fatigue. In more serious cases, influenza causes pneumonia, which can be fatal, particularly in young children and the elderly. While sometimes confused with the common cold, influenza is a much more severe disease and is caused by a different type of virus. Although nausea and vomiting can be produced, especially in children, these symptoms are more characteristic of the unrelated gastroenteritis, which is sometimes called "stomach flu" or "24-hour flu." Typically, influenza is transmitted from infected mammals through the air by coughs or sneezes, creating aerosols containing the virus, and from infected birds through their droppings. Influenza can also be transmitted by saliva, nasal secretions, feces and blood. Healthy individuals can become infected if they breathe in a virus-laden aerosol directly, or if they touch their eyes, nose or mouth after touching any of the aforementioned bodily fluids (or surfaces contaminated with those fluids). Flu viruses can remain infectious for about one week at human body temperature, over 30 days at 0 °C (32 °F), and indefinitely at very low temperatures. Most influenza strains can be inactivated easily by disinfectants and detergents (Coronavirus pandemic, 2020).

"Human influenza virus" usually refers to those subtypes that spread widely among humans. H1N1, H1N2, and H3N2 are the only known Influenza A virus subtypes currently circulating among humans. Genetic factors in distinguishing between "human flu viruses" and "avian influenza viruses" include:

- PB2: (RNA polymerase): Amino acid (or residue) position 627 in the PB2 protein encoded by the PB2 RNA gene. Until H5N1, all known avian influenza viruses had a Glu at position 627, while all human influenza viruses had a lysine.
- HA: (hemagglutinin): Avian influenza HA bind alpha 2–3 sialic acid receptors while human influenza HA bind alpha 2–6 sialic acid receptors.

"About 52 key genetic changes distinguish avian influenza strains from those that spread easily among people, according to researchers in Taiwan, who analyzed the genes of more than 400 A type flu viruses." "How many mutations would make an avian virus capable of infecting humans efficiently, or how many mutations would render an influenza virus a pandemic strain, is difficult to predict. They examined sequences from the 1918 strain, and suggested it to be the only pandemic influenza virus that could be entirely derived from avian strains. Of the 52 species-associated positions, 16 have residues typical for human strains; the others remained as avian signatures. The result supports the hypothesis that the 1918 pandemic virus is more closely related to the avian influenza A virus than are other human influenza viruses." (Coronavirus pandemic, 2020)

Highly pathogenic H5N1 avian influenza kills 50% of humans that catch it. In one case, a boy with H5N1 experienced diarrhea followed rapidly by a coma without developing respiratory or flu-like symptoms.

The Influenza A virus subtypes that have been confirmed in humans, ordered by the number of known human pandemic deaths, are:

- H1N1 caused "Spanish flu" and the 2009 swine flu outbreak (novel H1N1)
- H2N2 caused "Asian Flu"
- H3N2 caused "Hong Kong Flu"
changes

Spanish flu in 1918, caused three global pandemics during the 20th century: the

United States, based on data collected between 1979 and 41,400 people die of influenza

290,000 epidemics still cause severe illness in

Annual influenza epidemics are estimated to affect 5–15% of the global population. Although most cases are mild, these epidemics still cause severe illness in 3–5 million people and 290,000–650,000 deaths worldwide every year. On average 41,400 people die of influenza-related illnesses each year in the United States, based on data collected between 1979 and 2001. In industrialized countries, severe illness and deaths occur mainly in the high-risk populations of infants, the elderly and chronically ill patients, although the H1N1 flu outbreak (like the 1918 Spanish flu) differs in its tendency to affect younger, healthier people.

In addition to these annual epidemics, Influenza A virus strains caused three global pandemics during the 20th century: the Spanish flu in 1918, Asian flu in 1957, and Hong Kong flu in 1968–69. These virus strains had undergone major genetic changes for which the population did not possess significant immunity.

The Spanish flu began with a wave of mild cases in the spring, followed by more deadly waves in the autumn, eventually killing hundreds of thousands in the United States and 50–100 million worldwide. The great majority of deaths in the 1918 flu pandemic were the result of secondary bacterial pneumonia. The influenza virus damaged the lining of the bronchial tubes and lungs of victims, allowing common bacteria from the nose and throat to infect their lungs. Subsequent pandemics have had many fewer fatalities due to the development of antibiotic medicines which can treat pneumonia.

The influenza virus has caused several pandemic threats over the past century, including the pseudo-pandemic of 1947 (thought of as mild because although globally distributed, it caused relatively few deaths), the 1976 swine flu outbreak and the 1977 Russian flu, all caused by the H1N1 subtype. The world has been at an increased level of alert since the SARS epidemic in Southeast Asia (caused by the SARS corona virus). The level of preparedness was further increased and sustained with the advent of the H5N1 bird flu outbreaks because of H5N1's high fatality rate, although the strains currently prevalent have limited human-to-human transmission (anthroponotic) capability, or epidemicity.

People who contracted influenza before 1957 appeared to have some immunity to H1N1 flu. In June 2012, a model based study found that the number of deaths related to the H1N1 influenza may have been fifteen times higher than the reported laboratory confirmed deaths, with 80% of the respiratory and cardiovascular deaths in people younger than 65 years and 51% occurring in south-east Asia and Africa. A disproportionate number of pandemic deaths might have occurred in these regions and the efforts to prevent future influenza pandemics need to effectively target these regions.

A WHO-supported 2013 study estimated that the 2009 global pandemic respiratory mortality was ~10-fold higher than the World Health Organization's laboratory-confirmed mortality count (18.631). Although the pandemic mortality estimate was similar in magnitude to that of seasonal influenza, a marked shift toward mortality among persons <65 years of age occurred, so that many more life-years were lost. Between 123,000 and 203,000 pandemic respiratory deaths were estimated globally for the last 9 months of 2009. The majority (62–85%) were attributed to persons under 65 years of age. The burden varied greatly among countries. There was an almost 20-fold higher mortality in some countries in the Americas than in Europe. The model attributed 148,000–249,000 respiratory deaths to influenza in an average pre-pandemic season, with only 19% in persons <65 years of age.

The earliest pandemics of influenza, the Asiatic flu during 1889-1890, affected European countries including Berlin, Brussels, Lisbon, London, Paris, Prague, Vienna etc. This was followed by another pandemic-The Spanish Flu in 1918, which first emerged in China and Spain (Europe) being one of the earliest countries to be hit. It killed almost 50 million people and resulted in death of about 1 to 3% of world’s population. The Asian flu (1956-58) was identified in East Asia, spread throughout China and was widespread also in UK. It resulted in 2 million deaths. In 1968, another flu, the Hong Kong flu originated once again from China and resulted in four million deaths. The Swine flu pandemic during 2009-10 which initially
originated from Mexico, spread to many countries worldwide and killed 284,500 people.

And now, most recently, the world is facing the threat of Corona virus pandemic which has already claimed 2,03,000 lives till date and expecting many more casualties. The virus originated from Wuhan city of China and spread rapidly in other countries. As of 26 April 2020, more than 2.89 million cases of COVID-19 have been reported in 185 countries and territories. In New York City, deaths have been four times higher than average, in Paris twice as high, and in many European countries deaths have been on average 20 to 30 per cent higher than normal, Italy being one of the major places to be hit by the virus.

The ‘Black Death’ which swept through Europe, the Near East, and North Africa in the mid 14th Century, was probably the greatest public health disaster in recorded history and Europe lost an estimated one quarter to one third of its population and it has been suggested to be a tool for “Biological warfare” (Wheelis, 2002). With this Corona virus pandemic, history seems to be repeating itself in a way, suggesting that most dominating and ruling empires face a downfall or decline and raising a question “could this also be a weapon of the biological warfare”? Also, the theory of ‘Natural Selection’ is proven which states that in the course of evolution, nature plays it role and tries to wash off the less suitable individuals and supports the resistant strains of organisms to propagate and survive for the future. Yes, probably it seems that the so called ‘Survivor-Superior-humans’-the resistant strains of Corona virus will be the global rulers of the generations to come…………???

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