

Non evolutionary Death— War and Disease

I have chosen to review non evolutionary death first since it will provide the reader a good background for understanding the basic phenomena that limited growth recently in the world's history. Chronologically this makes sense, since most of this damage was done just prior to the major implementation of the evolutionary increases in life expectancy. It also serves to demonstrate to the reader how tenuous life on earth is and how close we have come to its elimination by recent natural events and events put into motion by man. Many of the people I talked to, or communicated through e-mails with, didn't realize the high level of deaths due to flu that occurred at the end of the First World War. You will see that this large number was due to the large number of deaths of people between nineteen and sixty years of age. These represent the ages that are normally not prone to major flu problems. It took years of study to determine why this age group was affected by the flu.

Great Famine of 1315–17 and the Black Death, 1346–53

In order to appreciate the deaths that occurred during the Great Famine early in the fourteenth century and the Black Death in the mid-fourteenth century, today's reader must realize the elements that we enjoy today that weren't present then and could have limited the loss of life. There were no electricity during this time, no motors, no central heating, no electric lights, no refrigeration, no mass means of communication, and many other elements that we now take as granted that would have significantly limited the deaths of the fourteenth century. This will be appreciated as one sees the cause of many of the deaths sustained during that period. It is also

important to realize that there were no known North America and South America continents, since they were not discovered until later in history. So the impacts were mainly in Europe and extending into Russia.

The Great Famine (1315–17)

The Great Famine of 1315 to 1317 mainly struck Europe, England, and as Far East as Russia. The famine was mainly initiated by poor weather and the fact that all these areas had grown in population and were near their limit in production of food required to support this population growth.⁽²⁾

These areas had been hit with severe winters followed by rainy and very cold summers. Keep in mind that in order to grow wheat crops, one has to plant a seed and have two produced—one to provide food and the other to provide the following years' crops. Before this weather period seeds planted produced as many as thirty seeds for each seed planted. During cold weather this could drop to seven seeds produced for each planting. This was sufficient to provide food and provide straw and hay for the animals that also would eventually provide food. However, during 1315, beginning with heavy rain in spring, it continued to rain at an unusual clip during the summer and remained cool during these periods. This was followed by severe winters. These conditions resulted in wheat seeds produced per seed planted dropping to two. Since there had been a significant growth of population prior to this period, the countries affected had reached levels of population where this drop in wheat production was severe. There was not enough food being produced to support this rise in population.

In addition to the lack of food production, there were other limiting factors for preserving what food was produced. Salt was the only means of curing and preserving meat, and it became quite limited due to the wet weather, since it required warm weather to evaporate moisture from the air and dry out the salt. Further economic problems accentuated these problems since costs went up and the poor were not able to afford the price of the food. Things got

so bad over time that even the wealthy could not afford the limited supplies of food. The limit had been reached where the supply was less than the increased population required—then it got worse. Steps were taken by the people to consume things that would normally be saved for the following years, thinking that the weather would be back to normal and they could make up for it then. But that didn't happen. As time proceeded and no relief occurred, this required that additional steps be taken, including consuming the animals used for farm work and transportation. The elderly ate even less so as to provide food for the children, and some forms of cannibalism started. It got worse—children were abandoned, crime went up tremendously, and cannibalism occurred in places such as prisons and the poor urban areas; family pets were also consumed. Those that died in prison were used as food for those that hadn't died. Graveyards had to be protected to prevent the removal of bodies for food. The death rate continued to increase dramatically due to increased illness among those who were starving to death. There were huge increases in pneumonia, bronchitis, tuberculosis, and diseases not even known at the time. One must keep in mind that during this period it was important for the means of travel to be available so that the workers who worked the fields and other areas requiring hands could make it to work. The consumption of their horses limited this means of transportation. The alternative was to walk long distances to work, but many of the workers were so ill from the lack of food that they could not walk any distance to their work. Each drastic step of this dreadful period seemed to create an additional happening, and the problems exploded exponentially.

The bad weather persisted through the year 1316. Those that had consumed their spare food thinking that the weather would revert back to normal were another step closer to starving. Depression existed throughout these countries due to the food issue, but it even got worse because of several significant issues. ⁽³⁾

Religion was affected since the prayers of those people over the extended time and the level of death and deprivation were not answered. They began to disbelieve their religion and faulted their churches. The churches were hit hard since they require participation

by their patrons to provide some means of support financially and physically—and it was not there. Without this support some churches closed and some were abandoned.

Government issues prevailed. The government didn't know how to handle this type of disaster. The government was not set up to handle this type of situation and failed to take possible steps that would have reduced the enormity of it all. Communication was poor, so changes they wanted to make were not employed or were employed too late. Now the populace began to rebel just as they had done on the religion issue. Poor people suffered the most. They were the ones who depended on their religion or their government to rectify the everyday consequences they were suffering.

Crime increased. Those that were starving took any and every step they could to survive. This included robbery and murder and any other means to feed themselves and their family. Mental instability, the lack of stable government, and the lack of proper policing were such that rapes occurred frequently. These acts were performed to satisfy some of the needs of those being affected. Depression is the seed for many issues in life, and this turned out to be a time when depression existed in every walk of life.

In 1317 the weather returned to normal; however, the height of the issues such as famine and religion and crime did not immediately take hold; life would return to normal over several years. It is estimated that life was not normal until around 1325, and even then the population had fallen well below the level that had existed in the end of 1312. It is estimated that the population of the cities and suburbs in these very populous countries had fallen by approximately 20 percent. The death toll was approximately one hundred million, with many dying from diseases they had contracted during the period of the Great Famine.

According to records of the British royal family, which were considered the best at that time, the average life expectancy in 1276 was 35.28 years; during the Great Famine it was 29.84. During the Black Death of 1348 and 1375 it fell to 17.33. This means the

population's average life span had been cut in half in those sixty years. Some records show that some of these countries never reached a life expectancy of 35.28 until the eighteenth century. ⁽¹⁴⁾ I have read some reports that say that some parts of France still haven't reached a life span of 35.28 years. France had been hit hard by these travesties.

The Black Death (1346–51)

The Black Death began in the year 1346, not long after the Great Famine. When one considers that many of the countries involved had just recovered from the Great Famine, one can understand the enormity of another major medical and depression problem. The population had been dramatically reduced and some sense of normalcy had just been established, when along came a new major medical and existence issue.

Recent DNA data indicate the Black Death originated in parts of Asia and traveled along the Silk Road (term used for the major road that was traveled from Asia and through the Middle East) to the Crimea, and from the Crimea across the Black Sea and the Mediterranean Sea in boats to parts of Europe. Eventually it manifested itself in most of the countries in northern and southern Europe.

It is believed that the main character that caused this disease was a black rat and its fleas. ⁽⁵⁾ The stomachs of the fleas were infected with bacteria called *Yersinia. Pestis*. The *Y. Pestis* could not be properly swallowed by the fleas and blocked their ability to provide blood to their stomach. Since they were trying to suck blood from the victim, and they were not getting the victim's blood, it was essentially starving the flea and caused it to suck that much harder to gain its food. As a result, instead of sucking blood from the rat, it was discharging the *Y. Pestis* directly into the victim. The rat then became the carrier and any fleas on it, or any that followed, sucked the rat's blood and took on the disease. This disease was carried from one rat to another. Eventually the fleas would get on humans and transfer the disease. Thus began the holocaust termed the Black Death.

At the time black rats were plentiful, and when they were carried from Asia in boats or by land on the many wagons carrying goods from the Far East, they brought their *Y. Pestis* with them. Wagons and passengers that boarded boats in the Crimea (on the Black Sea) resulted in all the rats on those ships also being infected. The ships traveled across the Black Sea to the Mediterranean Sea. From there ships traveled to Greece, Sicily, Italy, southern France, and other ports. From there the rats migrated north to northern Europe and even into England. Eventually they even made it as far north as Stockholm.

The good news is that the infection in each of the areas only lasted about a year. However, of those that were infected in an area, this resulted in approximately 30 to 70 percent of its victims dying in a given area. Whereas the Great Famine stretched over seven years across the whole of Europe and nailed the way of life across the whole territory, this Black Death was gone in each of the areas it hit in about a year. So there were a great number of deaths in each place, but after a year the area would begin to get back to normal. So it didn't affect governments as much and didn't affect the general way of living as much as the Great Famine. Of course there were a lot of victims in each area, but they were almost unaware of how much this disease was spreading about them in other parts of their country. They were aware of the number of dead bodies literally lying all around on the ground in their country, but they were not aware of the same thing hitting parts of Europe in the north or eventually Scandinavia. Keep in mind that communication was only by word in those days—no phones, no radios, no TV, no printed newspapers, no mail delivery to speak of, and the list goes on.

From Italy and other areas along the Mediterranean Sea the disease hit France, Spain, and Portugal; as it traveled north, it then spread to the east and west to England, parts of Germany, and eventually Russia. It is not known why the disease spared some of the countries in Europe.

This disease spread to England several times, but once the great fire of London hit, there were only faint occurrences afterward.