• Superintendent Cincinnati Parks
• Director Public Services
• Director of Metropolitan Sewer District

GRChecco@gmail.com
• Green Umbrella Greater Cincinnati
• Millcreek Valley Conservancy District
• Urban Forestry Advisory Board
• Charter Committee Cincinnati
• Clifton Town Meeting
• NCSU Board of Regents
• American Pilgrims of the Camino

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Chief of Staff – Councilmember David Mann

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GRChecco@gmail.com
Repubblica Fiorentina

1115 - 1569
Until a decade ago Florence, a City State, was prosperous, under a quasi-democratic institution led by Guilds.

The Banks of Florence are the dominant financial institutions in Europe.

The Golden Florin of Florence is used for international transactions (like dollar now).

Florence has been weakened by wars with other city states.

Draught, followed by floods have devastated crops leading to famine.

The King of England has defaulted on his loan to pay for the 100-year war with France.
January 1348
- Florence is enjoying the warm winter sun of Tuscany
- Rumor has it that there is a very strange illness in Messina (Sicily), but it does not concern Florentines, Messina is very far away…….

February 1348
- One person get sick.
- More people get sick.

March 1348
- Florence has lost half of its population.

- Sicily will lose 80% of its population
LA PESTE DI FIRENZE
DAL BOCCACCIO DESCRITTA
Piu’ Roberto Cappiani
The Great Mortality
The Great Mortality
The Bubonic Plague
The Black Plague
A glimpse into Apocalypse
Between 2002 and 2019, as I was working on my genealogy, I was struck by the unlikely journey of all of us to be alive now, following many generations of “survivors.”

23 Generations ago ~1350
about 8 Million Greatx22 Grand Parents
All 8 Million Grand Parents had to survive a Plague that killed half of Europe!
Mary Tothaker was intercepted by John Hewshorne July 26, 180,2. She claimed that because of the fear of the Indians, she made a pact with the Devil for protection. It has been speculated that her confession was coerced by torture or completely fabricated. The fear of Indians was spectacularly justified. The area had been attacked by Indians, or as happened in many cases, white men massacring an Indian. Two
<table>
<thead>
<tr>
<th>Name</th>
<th>Born</th>
<th>Died</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giuseppe Romano Colonna</td>
<td>about 1540</td>
<td>1570</td>
<td>Lipari, Messina, Sicily</td>
</tr>
<tr>
<td>Tommaso Virgona</td>
<td>1532</td>
<td></td>
<td>Lipari, Messina, Sicily</td>
</tr>
<tr>
<td>Porzia Piluso</td>
<td>1536</td>
<td></td>
<td>Lipari, Messina, Sicily</td>
</tr>
<tr>
<td>Pulverino Maiuri</td>
<td>1554</td>
<td></td>
<td>Alicudi, Messina, Sicily</td>
</tr>
<tr>
<td>Gnola Pilverino</td>
<td>1554</td>
<td></td>
<td>Alicudi, Messina, Sicily</td>
</tr>
</tbody>
</table>
Thomas Prowse  
- b: 1420-1479  
- d: 1457 - 1510

Marie Jane Prowse  
- b: 1433 - 1486  
- d: 1457 - 1527

Jane Baynton  
- b: 1456, Falstone, England  
- d: 1474

Hugh Mallet  
- b: Jan 1399 St. Audries, England  
- d: Feb 1460 (same)

Margaret Curry Mallet  
- b: 1448, Curry Mallet, England  
- d: 27 Aug 1500, Devon, England

Henry Bayton  
- b: 1407, Falstone, England  
- d: 20 Jun 1465, Fallardevon., England

Joan De Echingham  
- b: 1403, Etchingham, England  
- d: 1473, Lutton, England

Joan Runyon  
- b: 1401, Compton Martin, England  
- d: 1460, St. Audries, England

End of Branch 1399
Between 2002 and 2019, as I was working on my genealogy, I was struck by the unlikely journey of all of us to be alive now, following many generations of “survivors.”

Probability of being alive:

1 out of 10 $^{2,685,000}$
You have a better chance of winning the Mega Millions Lottery Every day of your life than to be alive.
Between 2002 and 2019, as I was working on my genealogy, I was struck by the unlikely journey of all of us to be alive now, following many generations of “survivors.”

In 2020, as COVID was taking hold of the world, I wondered about previous pandemics.
Pandemics in History
From Animals to Humans
Three Plagues in One
Heading Toward a Disaster
Aggravating Circumstances
Plague Doctors and Success Stories
Consequences and Conclusion
Pandemics in History
<table>
<thead>
<tr>
<th>YEAR</th>
<th>Disease</th>
<th>Spread</th>
<th>Death</th>
<th>Vector</th>
<th>V/B?</th>
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<tbody>
<tr>
<td>2012</td>
<td>Yellow Fever</td>
<td>Darfur, Sudan</td>
<td>1,000 Mosquitos</td>
<td>Virus Flavivirus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>YEAR</td>
<td>Disease</td>
<td>Spread</td>
<td>Death</td>
<td>Vector</td>
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<tr>
<td>---</td>
<td>------</td>
<td>------------------</td>
<td>-------------</td>
<td>---------------</td>
<td>-----------</td>
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<tr>
<td>1896</td>
<td>Cholera</td>
<td>India</td>
<td>10,000</td>
<td>Food/ Drink</td>
<td>Bacterium</td>
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<tr>
<td>2013</td>
<td>Ebola</td>
<td>India</td>
<td>11,300</td>
<td>Bats</td>
<td>Virus</td>
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<tr>
<td>1709</td>
<td>Smallpox</td>
<td>Iceland</td>
<td>18,000</td>
<td>Rodent (?)</td>
<td>Virus</td>
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<tr>
<td>1709</td>
<td>Plague</td>
<td>Austria</td>
<td>76,000</td>
<td>Rats/ Flees</td>
<td>Bacterium</td>
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<tr>
<td>430BC</td>
<td>Typhoid</td>
<td>Greece</td>
<td>90,000</td>
<td>Food/ Drink</td>
<td>Bacterium</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>1666</td>
<td>Plague</td>
<td>England</td>
<td>125,000</td>
<td>Rats/ Flees</td>
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<tr>
<td></td>
<td>1816</td>
<td>Cholera</td>
<td>Asia/ Europe</td>
<td>150,000</td>
<td>Food/ Drink</td>
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<tr>
<td>2009</td>
<td>Influenza (H1N1)</td>
<td>World Wide</td>
<td>200,000</td>
<td>Birds</td>
<td>Virus</td>
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<tr>
<td>1631</td>
<td>Plague</td>
<td>Italy</td>
<td>280,000</td>
<td>Rats/ Flees</td>
<td>Bacterium</td>
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<tr>
<td>2020</td>
<td>COVID19</td>
<td>World Wide</td>
<td>4,000,000 to 10,000,000</td>
<td>Bats?</td>
<td>Virus</td>
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<tr>
<td>1890</td>
<td>Influenza (H3N8)</td>
<td>World Wide</td>
<td>1,000,000</td>
<td>Birds</td>
<td>Virus</td>
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<tr>
<td>1852</td>
<td>Cholera</td>
<td>Russia</td>
<td>1,100,000</td>
<td>Food/ Drink</td>
<td>Bacterium</td>
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<tr>
<td>1968</td>
<td>Influenza (H3N2)</td>
<td>World Wide</td>
<td>1,250,000</td>
<td>Birds</td>
<td>Virus</td>
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<tr>
<td>1957</td>
<td>Influenza (H2N2)</td>
<td>World Wide</td>
<td>2,000,000</td>
<td>Birds</td>
<td>Virus</td>
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<tr>
<td>180</td>
<td>Smallpox</td>
<td>Roman Empire</td>
<td>10,000,000</td>
<td>Rodent (?)</td>
<td>Virus</td>
</tr>
<tr>
<td>1545</td>
<td>Salmonella</td>
<td>Mexico</td>
<td>15,000,000</td>
<td>Food/ Drink</td>
<td>Bacterium</td>
</tr>
</tbody>
</table>

Sidebar: COVID19 is amongst the top ten Pandemics in the World history
• *Y. Pestis* was identified in 1894 by Alexander Yersine a French/ Swiss/ Russian researcher at the French Pasteur Institute and Kitasato Shibasaburo, a Japanese bacteriologist.

It will take over 500 years after the “Great Mortality” to identify what caused the Plague.

Sidebar: The Influenza’s virus was only discovered in the 1930’s.
On and Off pandemic for 200 years causing 50 million deaths
Virus vs. Bacterium
Viruses
Fungi are plant-like organisms that do not synthesize their own food but feed off other organisms. Fungal diseases can infect different parts of your body, including your nails, skin, body hair, some body organs and your nervous system. Some of the more well-known include athlete’s foot and yeast infections.
Protozoa are microscopic one-celled animals. They act as parasites. Serious infections caused by protozoa are often transmitted through contaminated water or insects such as mosquitoes. Malaria is an example of a disease caused by a protozoa parasite.
Miasma Theory VS. Germ Theory
Germ Theory
Pandemics in History

- From Animals to Humans
- Three Plagues in One
- Heading Toward a Disaster
- Aggravating Circumstances
- Plague Doctors and Success Stories
- Consequences and Conclusion
From Animals to Humans
Chain of Transmission between Species

Sidebar 1: It is believed that major floods happened in Central Asia, which devastated the marmot population, fleas found another host.

Sidebar 2: The “marmot flee” found rats traveling with large caravans of the “silk road” through Central Asia.
Oriental Flea
Xenopsylla cheopis
Can live without a host for Over a Month
Can Live on almost Any Surface
Since you asked .... Part1

Flea Biology
Yersinia pestis
Blocks the Midgut

- The flea cannot drink the blood because of blockage
- Sick rat dies
• The flea cannot drink the blood because of blockage
• Sick rat dies
• The Flea is VERY hungry
• Flea finds another creature
• Vomit its gut to clear the blockage
Since you asked ....
Part2

Black Rat

- Tail: longer than rest of body
- Body shape: slender
- Ears: big
- Eyes: big
- Snout: pointed
Since you asked ....
Part 2
Black Rat
“Since you asked ….

Part 2

Black Rat

“Fun Facts”

- Evolved in Asia – 15,000 years ago
- Impressive Reproduction – 3 years of reproduction → 3 million rats
- Can Climb vertical surfaces
- Very smart and adaptive
- Survive a fall of 5 stories
- Vector of many diseases both bacterial and viral
  - Bubonic Plague (Bacterium)
  - Typhus (Bacterium)
  - Leptospirosis – Blood infection (Bacterium)
  - Toxoplasmosis (Parasite)
  - Hantavirus Pulmonary Syndrome (Virus)
  - Lassa Fever (Virus)
Since you asked ....
Part 2

Rodent come from Latin “Rodere” – To Gnaw

Can chew its way through lead and concrete
Medieval city walls were not a real barrier
Pandemics in History

From Animals to Humans

Three Plagues in One

Heading Toward a Disaster

Aggravating Circumstances

Plague Doctors and Success Stories

Consequences and Conclusion
Three Plagues in One
Three Plagues in One!

- Bubonic plague,
- Pneumonic plague,
- Septicemic plague
Three Plagues in One!

- Bubonic plague,
- Pneumonic plague,
- Septicemic plague

- Bubonic plague, the most common form, is transmitted by a flea bite and has a two-to six-day incubation.
- Bubonic plague is the most survivable of the three forms of the disease. Untreated, it has a mortality rate of about 60 percent.
Three Plagues in One!

- Bubonic plague,
- Pneumonic plague,
- Septicemic plague

- Pneumonic can spread directly from person to person.
- Pneumonic plague was not merely highly contagious but explosive
- The “coughing plague” is extremely lethal. If it goes untreated, the mortality rate in its victims is between 95 and 100 percent.
Three Plagues in One!

- Bubonic plague,
- Pneumonic plague,
- Septicemic plague

No one survives untreated septicemic plague, the third form of the disease.

Massive amounts of bacteria directly into the blood system creates such enormous toxicity that even insects normally incapable of transmitting Y. pestis, (body lice,) can become disease vectors.

During one outbreak of septicemic plague in the early twentieth century, the average survival time from onset of symptoms to death was **14.5 hours**.

the extremities become as black and hard as coal—inspired the term Black Death, but septicemic disease is uncommon,

Sidebar: Plague still exists today with 650 cases reported each year – 10% mortality – rats, squirrels, marmots,.....
Pandemics in History
From Animals to Humans
Three Plagues in One
Heading Toward a Disaster
Aggravating Circumstances
Plague Doctors and Success Stories
Consequences and Conclusion
Heading Toward a Disaster
### Historical Markers

<table>
<thead>
<tr>
<th>Period</th>
<th>Start Year</th>
<th>End Year</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roman Kingdom</td>
<td>753 BC</td>
<td>509 BC</td>
<td>244 years</td>
</tr>
<tr>
<td>Roman Republic</td>
<td>509 BC</td>
<td>27 BC</td>
<td>482 years</td>
</tr>
<tr>
<td>Roman Empire</td>
<td>27 BC</td>
<td>395 AD</td>
<td>368 years</td>
</tr>
<tr>
<td>Roman Empire West</td>
<td>395 AD</td>
<td>480 AD</td>
<td>85 years</td>
</tr>
<tr>
<td>Roman Empire East</td>
<td>395 AD</td>
<td>1461 AD</td>
<td>1066 years</td>
</tr>
</tbody>
</table>

The Plague happened when the Roman Empire was slowly dying.
Western World in 14th Century

- Religious
- Feudal
- Agrarian
Marco Polo

Venetian
1254- 1324
Travel the Silk Road
1271-1295

Between 1250 and 1350 the medieval world experienced an early burst of globalization
Mongol Empire
Caffa, at the southeastern edge of Crimea, was perfectly situated to exploit the new global economy - Link between the Western & Eastern World.

- The port of Caffa was held under a grant from the Mongols.
- Caffa, built by Genoa, Italian outpost.
- Mongol Empire is split end of 13th century
- Trade dispute between Golden Horde and Genoa about slave trade

Sidebar: Many Slavic men were sold in Caffa, as slaves to fight medieval wars, the name is the origin of the English word “SLAVE”

Sidebar: The Italian word “Ciao” is a venetian contraction of “I am your Slave” or “I am at your service”
Multiple sieges of Caffa by the Golden Horde
Caffa resisted because of its dominance of the sea and support of Italian City States
Mongols are dying of a mysterious illness and need to abandon the siege in 1347
Before doing so, they catapult their dead corpses over the walls of Caffa
• 1000’s of putrefied dead bodies catapulted
• Bodies “exploded” on arrival
• Spreading the bacteria and attracting the rats
• Genoans are now dying in mass
• Survivors abandon Caffa
• Carrying the bacteria with them
• ... and the rats under the deck!
Scale of the disaster

- Up to 200 million death (75 million to 200 million) worldwide
- At least 25 million death in Europe
- From 1346 to 1353 – 7 years
- Only World War II with 85 million death is comparable
- As a percentage, today a disaster on the scale of the Black Death would claim 1.9 billion lives.
Pandemics in History
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Consequences and Conclusion
Aggravating circumstances
• Early 14th Century warming weather and better crop
  → Increase in population
• Now cooling, with overpopulation and not enough food
• Then draught and flooding
  → Crop's failure
  → Malnutrition
• Increase in conflicts and wars
• The highest number of conflicts in history
  o Scots vs British
  o French vs British (100-year War)
  o French vs Dutch
  o Italian vs Spanish
Early medieval Europeans washed or changed their clothes once a year.
Medieval city a human cesspool.
In medieval Paris, several street names were inspired by merde. There were rue Merdeux, rue Merdelet, rue Merdusson, rue des Merdons, and rue Merdiere—as well as a rue du Pipi.
Sanitation legislation consisted of an ordinance requiring homeowners to shout, “Look out below!” three times before dumping a full chamber pot into the street.
Medieval theories of the reasons

- Renowned Paris medical faculty pronounced the cause of the disease to be “an unusual conjunction of Saturn, Mars, and Jupiter at one on the afternoon on March 20th, 1345.”
- Some Church leaders said that it was punishment for sins,
- Accusations against Jewish families spread that they had caused the disease by deliberately poisoning wells.
1pm March 20th, 1345
* assuming local time
Trump's New Favorite COVID Doctor Believes in Alien DNA, Demon Sperm, and Hydroxychloroquine

The president is pushing the coronavirus theories of a Houston doctor who also says sexual visitations by demons and alien DNA are at the root of Americans’ common health concerns.
Jewish Communities intensely persecuted and massacred, blamed for outbreaks of the Plague, because of their perceived immunity in Europe from 1348 to 1351.

- Toulon, France, April 1348
- Barcelona, Spain, 1348
- Erfurt, 1349
- Basel, 1349
- Aragon, Spain, 1349
- Flanders, Holland, 1349
- Strasbourg, France, 1349
- Frankfurt, Germany, 1349
- Mainz, Germany, 1349
- Speyer, Germany, 1349
"It cannot be true that the Jews, by such a heinous crime, are the cause or occasion of the plague, because through many parts of the world the same plague, by the hidden judgment of God, has afflicted and afflicts the Jews themselves and many other races who have never lived alongside them."

Pope Clement VI
GOP Congresswoman Blamed Wildfires on Secret Jewish Space Laser

By Jonathan Chait
Pandemics in History

From Animals to Humans

Three Plagues in One

Heading Toward a Disaster

Aggravating Circumstances

Plague Doctors and Success Stories

Consequences and Conclusion
Plague Doctors & Success Stories
A plague doctor was a physician who treated victims of the plague. These physicians were hired by towns and since the city was paying them a salary, they treated everyone, rich or poor. An early example of “Public Health.”
Success Stories

Guarding Cities

Poland

Quarantine

Milan
Only 15% death in Milan
Pandemics in History
From Animals to Humans
Three Plagues in One
Heading Toward a Disaster
Aggravating Circumstances
Plague Doctors and Success Stories
Consequences and Conclusion
Consequences & Conclusion
Scale of the disaster (2)

- The largest pandemic ever
- One third to half of Europe population dead
- World population from 475 million to 300 million
- Florence population from 120,000 to 50,000
- England population from 7 million to 2 million
- Over 1,500 villages in England eliminated
- Entire Jewish population in parts of Europe, eliminated

- Drastic Reduction of Wars
- Reinventing Services
- Peasants no longer property of Nobles (Quasi end of feudality)
- Craftsmen (Guilds) can now negotiate better contracts
- Both for urban workers and for peasants
Renaissance

ARTISTS
Da Vinci  Michelangelo  Raphael  Titian  Donatello

WRITERS
Shakespeare  Cervantes  Petrarch  Montaigne  Ronsard  Valois-Angouleme

SCIENTISTS
Copernicus  Paracelsus  Francis Bacon  Galileo  Kepler  Newton  Hallois  Aragnois

THINKERS
Descartes  Newton

THEOLOGIANS
Martin Luther  Erasmus

Da Vinci  Michelangelo  Raphael  Thomas More  Machiavelli  Descartes
<table>
<thead>
<tr>
<th>Ranks</th>
<th>Event</th>
<th>Deaths</th>
<th>Location</th>
<th>From</th>
<th>Until</th>
<th>Duration</th>
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<tbody>
<tr>
<td>1</td>
<td>World War II</td>
<td>84,269,920</td>
<td>Worldwide</td>
<td>1939</td>
<td>1945</td>
<td>6 years</td>
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<tr>
<td>2</td>
<td>Three Kingdoms</td>
<td>37,947,332</td>
<td>China</td>
<td>184</td>
<td>280</td>
<td>96 years</td>
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<tr>
<td>3</td>
<td>Mongol conquests</td>
<td>34,641,016</td>
<td>Eurasia</td>
<td>1206</td>
<td>1405</td>
<td>199 years</td>
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<tr>
<td>4</td>
<td>European colon. of the Americas</td>
<td>34,047,026</td>
<td>Americas</td>
<td>1492</td>
<td>1691</td>
<td>199 years</td>
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<tr>
<td>5</td>
<td>Taiping Rebellion</td>
<td>31,622,777</td>
<td>China</td>
<td>1851</td>
<td>1864</td>
<td>14 years</td>
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<tr>
<td>6</td>
<td>Transition from Ming to Qing</td>
<td>25,000,000</td>
<td>China</td>
<td>1618</td>
<td>1683</td>
<td>65 years</td>
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<td>7</td>
<td>Second Sino-Japanese War</td>
<td>22,360,680</td>
<td>China</td>
<td>1937</td>
<td>1945</td>
<td>8 years</td>
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<tr>
<td>8</td>
<td>An Lushan Rebellion</td>
<td>21,633,308</td>
<td>China</td>
<td>755</td>
<td>763</td>
<td>8 years</td>
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<td>World War I</td>
<td>23,568,559</td>
<td>Worldwide</td>
<td>1914</td>
<td>1918</td>
<td>4 years</td>
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<td>Conquests of Timur</td>
<td>12,649,111</td>
<td>Central Asia,</td>
<td>1370</td>
<td>1405</td>
<td>35 years</td>
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<td>Rank</td>
<td>Death toll</td>
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<td>Date</td>
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<tr>
<td>1</td>
<td>4,000,000</td>
<td>1931 China floods</td>
<td>China</td>
<td>July 1931</td>
<td></td>
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<td>2</td>
<td>2,000,000</td>
<td>1887 Yellow River flood</td>
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<td>September 1887</td>
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<td>3</td>
<td>830,000</td>
<td>1556 Shaanxi earthquake</td>
<td>China</td>
<td>January 23, 1556</td>
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<td>4</td>
<td>655,000</td>
<td>1976 Tangshan earthquake</td>
<td>East Pakistan (now Bangladesh)</td>
<td>July 28, 1976</td>
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<td>5</td>
<td>500,000</td>
<td>1970 Bhola cyclone</td>
<td>East Pakistan (now Bangladesh)</td>
<td>November 13, 1970</td>
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<td>6</td>
<td>316,000</td>
<td>2010 Haiti earthquake</td>
<td>Haiti</td>
<td>January 12, 2010</td>
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<tr>
<td>7</td>
<td>300,000</td>
<td>526 Antioch earthquake</td>
<td>Byzantine Empire (now Turkey)</td>
<td>May 526</td>
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<tr>
<td>8</td>
<td>300,000</td>
<td>1881 Haiphong typhoon</td>
<td>Vietnam</td>
<td>October 8, 1881</td>
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<tr>
<td>9</td>
<td>273,400</td>
<td>1920 Haiyuan earthquake</td>
<td>China</td>
<td>December 16, 1920</td>
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<tr>
<td>10</td>
<td>229,000</td>
<td>Typhoon Nina</td>
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<td>August 7, 1975</td>
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<td>Year</td>
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<td>1852</td>
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<td>1968</td>
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<td>180</td>
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<td>Smallpox</td>
<td>Roman Empire</td>
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<td>2020</td>
<td>6,000,000+</td>
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<td>1353</td>
<td>200,000,000</td>
<td>Plague</td>
<td>Europe/ Asia/ N. Africa</td>
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<td>542</td>
<td>50,000,000</td>
<td>Plague</td>
<td>Europe/ Egypt</td>
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<td>AIDS</td>
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World War I
FOUR YEARS

About 24 Million deaths
Est-ce un péché ? Non non. Vous leur fîtes,
Seigneur,
En les croquant beaucoup d'honneur;
Et quant au berger, l'on peut dire
Qu'il était digne de tous maux,
Étant de ces gens-là qui sur les animaux
Se font un chimérique empire. »
Ainsi dit le Renard : et flatteurs d'applaudir.
On n'osa trop approfondir
Du Tigre, ni de l'Ours, ni des autres puissances,
Les moins pardonnable offenses.
Tous les gens querelleurs, jusqu'aux simples
mâtins,
Au dire de chacun, étaient de petits saints.
L'Âne vint à son tour, et dit : « J'ai souvenance
Qu'en un pré de moines passant,
La faim, l'occasion, l'herbe tendre, et je pense
Quelque diable aussi me poussant,
Je tondis de ce pré la largeur de ma langue.
Je n'en avais nul droit, puisqu'il faut parler net. »
À ces mots, on cria haro sur le baudet.
Un Loup, quelque peu clerc, prouva par sa
harangue
Qu'il fallait dévouer ce maudit animal,
Ce pelé, ce galeux, d'où venait tout leur mal.
Sa peccadille fut jugée un cas pendable.
Manger l'herbe d'autrui ! quel crime abominable !
Rien que la mort n'était capable
D'expier son forfait : on le lui fit bien voir.
Selon que vous serez puissant ou misérable,
Les jugements de cour vous rendront blanc ou noir.
CONCLUSION

- We are nothing but the sum of all who preceded us.
- We are the sum of survivors. We are survivors.
- Being alive now is like having won the ‘Jackpot’ of Life.
- Grateful, decent and kind.
- Recovery from the COVID pandemic offers opportunities to re-invent society.
- Toward a 21st Century Renaissance?
THANK YOU!