Fourteenth-Century Crises I: Cows, Rain, and Fleas

How to Make Someone Die of Laughter, 13th century

"Beneath the armpits are certain veins called "ticklish" which, if they are cut, cause a man to die of laughter."

Richardus Salernitanus (13th c.?)
Today we’re looking at...

- Fourteenth-Century – Everything goes upside down!
- Famines
- Epidemics
  - Bovine
  - The Black Death
- Next class: social unrest, cultural tensions, and outcomes of Black Death
A Century of Crises?

- Overpopulation
- Famine
- Epidemic
- Historical question – how do societies respond to mass disaster?
Timeline: The Great Famine

- The Great European Famine
- 1315 to 1317
- The end of the Medieval Warm period brought colder and wetter temperatures to Europe which in turn caused widespread crop failure and forced Europe into three years of famine. This period of famine would result in the death of millions throughout Europe, and would have a horrifying effect on European society as many were forced to abandon their children to conserve food, or resort to cannibalism. The famine would also cause changes in the structure of European society and would leave an already unprepared population in an even worse state to combat the 'Black Plague' which would come later in the 14th century.
The Great Famine

- Famines occur in Europe in 1272, 1277, 1283, 1292, and 1311
- 1250 saw the end of the ‘Little Optimum’ – a rise in average temperature by 1 degree; long dry summers – good for farming
  - Start of the Little Ice Age?
- Population growth coincides with weather change – no margin for crop failure
- **Magna Fames**
  - 1315-1322 = 14 continuous bad harvests
  - The worst is 1315-1317
  - Rainy winters, summers of drought
    - Prevents plowing; seed rots – that which grows, dies
  - 10% of population dies

Fames (Famine) – Erfurt, 1320
The Great Famine
The Great Famine

- **from Flanders:**
  ...on account of the torrential rains and because the fruits of the earth were harvested in difficult conditions and destroyed in many places, there was a dearth of wheat and of salt ... the human bodies started growing weaker and disabilities developed.... So many people died every day ... that the air seemed to be putrefied ... miserable beggars died ... in great numbers in the streets, on dunghills....

- --Abbot of St. Martin of Tournai

- **from Italy:**
  The famine was felt not only in Florence but throughout Tuscany and Italy. And so terrible was it that the Perugians, the Sienese, the Lucchese, the Pistolese and many other townsmen drove from their territory all their beggars because they could not support them.... The agitation of the [Florentines] at the market of San Michele was so great that it was necessary to protect officials by means of guards fitted out with an axe and block to punish rioters on the spot with the loss of their hands and their feet.

- --Giovanni Villani
The Great Murrain

- Epidemic of infectious diseases in livestock – particularly cattle and sheep
- 1318-1350
- Animals go through famine as well
- Pathogen from the east
  - Foot-and-Mouth-Disease or Rinderpest?
- Spread in farms, but also trading areas & herds, cattle and livestock raids in areas of conflict, movement of people (horses etc)
- 1318-19
  - Hadleigh (Essex) lost 86% of its sheep and cattle
  - Over all, English cattle / oxen mortality is c. 63%
- 1320
  - Few animals remain – men must plough fields themselves in England; compounds famine
Effects: A Weakened Population?

- Draft animals slaughtered & seed grain was eaten
- Cannibalism?
- By mid-1320s recovery, but...
  - Mass malnutrition
  - Surviving people and animals were simply too weak to work effectively
  - Further deaths from inability to fight off pneumonia, bronchitis, tuberculosis, and other sicknesses
- Murrain – effects felt for a generation
  - Loss of plowing force, but also fertilizer – less productive soil
  - Loss of milk, which means loss of cheese production
  - Loss of meat – you can’t eat the ones that remain!
The Black Death – What’s in a name?

- “Black Death” is an early 19th-century coinage
- Pestilence, Great Plague, Peste, Mortality
- Difficulty of historical retro-diagnosis
  - Bubonic plague? (Or not?)
  - The Same Disease?
    - Plague of Athens 430-425 BCE (measles?)
    - Plague of Antoninus 165-180 CE (smallpox?)
    - Plague of St. Cyprian 250-265 CE (meningitis? Dysentery?)
    - Justinian’s plague, 541-c.700 CE
      - First wave killed 40% of population in Byzantium; 20-25% south of the Alps
      - Later wave - 599-600 CE – 15% of Italy and France
- Black Death 1348-1720s
- Third Pandemic, 1850s-1950s
Bubonic Plague

- Environmental changes in Asia -- westward migration of the black rat
- Rat population in seaports along Black Sea and on ships -- increased East-West sea trade
## The Plague - Forms

<table>
<thead>
<tr>
<th>Bubonic</th>
<th>Pneumonic</th>
<th>Septicemic</th>
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<tbody>
<tr>
<td>microbe enters body through <strong>skin</strong> untreated, <strong>death occurs 5-8 days after onset</strong> 60-70% fatality rate</td>
<td>microbe enters body through <strong>lungs</strong> untreated, <strong>death occurs 1-3 days after onset</strong> 100% fatality rate</td>
<td>rare form and poorly understood untreated, <strong>death occurs within hours after onset</strong> 100% fatality rate</td>
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<tr>
<td>flea bite&lt;br&gt;ingested flea feces&lt;br&gt;bites from bedbugs and lice&lt;br&gt;direct contact with live, or recently dead victim's body fluids</td>
<td>inspired airborne flea feces inspired airborne droplets from victim's sneeze or cough</td>
<td>mode of transmission uncertain</td>
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<tr>
<td><strong>1-6 days of incubation</strong> Abrupt onset with fever (102-104°F)</td>
<td><strong>1-3 days of incubation</strong> Abrupt onset with fever (102°F) high pulse rate: 90-120 bpm</td>
<td><strong>Virtually no incubation period</strong> Abrupt onset</td>
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<tr>
<td><strong>1-2 days after onset:</strong> headache&lt;br&gt;general feeling of weakness&lt;br&gt;aches and chills&lt;br&gt;white coating on the tongue&lt;br&gt;rapid pulse&lt;br&gt;slurred speech, confusion&lt;br&gt;fatigue, apathy and staggering gait&lt;br&gt;blackish pustule (plague carbuncle) at point of inoculation (usually a flea bite somewhere on leg)</td>
<td><strong>1-3 days after onset:</strong> back and side pain&lt;br&gt;cough&lt;br&gt;at first moderate with some sputum&lt;br&gt;then violent with blood&lt;br&gt;Choking&lt;br&gt;victim must sit up to breathe&lt;br&gt;death</td>
<td><strong>Death</strong></td>
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Timeline: The Black Death

- Outbreak of the Black Death Plague in Europe
- 1348 to 1350
- The plague that has been coined, 'black death' originated in Asia and travelled to Sicily and then would promptly spread throughout Eastern Europe in 1348 which would result in the death of 100s of millions people in Europe. Some estimates have put the black death at reducing the world's population by 25%, thus making it the most deadly pandemic in recorded history.
The Black Death - Spread

- From Mongols to Crimea
- Genoese traders, to southern France
- Landfall at Weymouth in England
- Some areas free of plague - mysteriously
The Black Death – Causes

- the medical faculty of the University of Paris October 1348
  - the atmosphere was corrupted by conjunction of Jupiter, Saturn and Mars in the 40th degree of Aquarius on March 20, 1345
  - Hot foul air gathered in east, and moved westward
  - Develops into *miasma* theory of contagion – contaminated air

- Religious explanations
  - Human sin
  - Religious impiety – Pope leads processions; mass public ‘penance’
  - Pursuit of luxuries
Bring out your Dead

50% Orvieto (Italy), Siena (Italy), and Volterra (Italy)

50-68% Hamburg (Germany), Perpignan (France), Barcelona (Spain clerical population)

70% Bremen (Germany)
The Black Death – Management & Treatment

- **Humourial Medicine**
  - prescribed blood-letting or purgatives to restore the internal balance of humours within the body, or ointments to reduce swellings, lancing of buboes
  - Doctor’s suit
  - Beaked mask, filled with use of pungent herbs & rose hips
  - Coarse, heavy waxed cloth or leather

- **Fumigation**
  - Pope Clement VI - stayed in his apartment and had large fires lit in his room, constantly stoked to keep them going

- **Civic Regulation**
  - Movement of people
  - Quarantine – 40 days
  - Boarding up houses
  - Mass graves
  - Burial outside towns
Outcomes – Europe at 1353

- 60-63% mortality? 50 million out of a total population of 80 million
- The local impact severe
  - households in Chambéry in France from 403 in 1348 to 184
  - Number of wills proved in London courts increased 15 fold between 1348 & 1349
- San Gimignano in Italy from population of 11,400 in 1322 collapsing to 4,500 in 1349
Making Sense – Signs

- Providential – Divine - indicators
  - unusual weather
    - heavy mists and clouds
    - falling stars
    - hot wind from the South
    - column of fire stood above the papal palace at Avignon
    - ball of fire seen in skies above Paris
    - earthquake in Venice chimed the bells of St. Mark's
    - earthquakes in Naples, Rome, Pisa, Bologna, Padua
  - unusual events
    - a stranded whale
    - an outstandingly good crop of hazelnuts
    - blood fell from bread when taken from the oven
    - mysterious bloodstains found on men's clothes
    - wine in the casks had become turbid (proof that changes causing a decomposition of the atmosphere had taken place)
Making Sense – Cultural Failure?

- Why did some people fall ill and not others?
- Why did some victims recover while others died?
- Why did some die suddenly even though they did not show any symptoms?
- Wrath of God seemed to be turned on all of mankind
  - No one, not even village priests or other authoritative figures, had the slightest notion of how the world would turn out
  - Prayers & Processions & Penance don’t seem to work
  - Mortality was very high in closed communities like monasteries
  - Good priests who did their duty died first
  - Not enough priests left to hear confessions, give absolution and the last rights
  - Pope granted remission of sins to all plague victims
  - Emergency confession – even to women
Making Sense – The Four Horsemen

- Dearth, Famine, and Plague signs of the end times?
- The Apocalypse?
  - The four horsemen of the Book of Revelations, Bible: Conquest, War, Famine, and Death

- Period writing describes the apocalypse
- John of Rupescissa, Liber Secretorum Eventuum
  - Predicts disaster
  - Written in 1340s
  - Plague in 1347
  - Bodies piled in 1348
  - War between 1370-1415
  - Millennium of Peace
  - 2370 end of the World
Making Sense - Piety

- **Ascetic Piety**
  - The proper response to the Plague – prayer and austerity of life?

- **Flagellants**
  - Germany and the Netherlands
  - Extreme ascetics – self-harm; punishment for sin
  - beating themselves with whips embedded with nails as sacrificial objects of atonement for society’s sins
  - Frankfurt, Mainz, Cologne and Brussels see attacks on the local Jewish community
  - 1349 denounced as heretical

- **Saint Roch / San Rocco**
  - obscure biography: mid-14th century?
  - popular cult by 1400
  - achieves sainthood through surviving plague and protecting others
  - suffering = imitatio Christi
Making Sense - Luxuries

- Live in the now!
- Psychological impact
  - individualistic pursuit of pleasure
  - hedonism manifested in the purchase of luxuries, especially in Italy
  - Gross volume of luxury goods manufactured and sold rose exceeds pre-Plague levels – even with smaller population
- Exacerbates the moral corruption that caused the plague?
- Skilled Artisans and manufactures – make money!
Making Sense – The Plague

- Becomes endemic to Europe until 1770s
  - Florence 9 outbreaks between 1509-1531
- Cultural & Social ‘boogeyman’ of Europe
  - Forces regulations, development of medicine, etc.
  - Creation of civic health boards (esp. in Italy)
- Roughly 12 year intervals
- Largely disappears by 1660s
  - Italy has outbreaks in 1630s
  - Barcelona 1651
  - London 1665
  - Marseilles 50% mortality in 1722
  - Russian 1770-1772
Making Sense – Culture of Death

- Tapestry of the Apocalypse in Angers, France
  - 1377-1382
Making Sense – Culture of Death
Making Sense – Culture of Death

- Sedlec Ossuary outside the town of Kutna Hora, Czech Republic
Making Sense – Christ’s Humanity
Take Away

- 1350 marks a clear and definitive ‘watershed’ moment in European history
  - Mass mortality
- The Plague’s effects are deep and profound, and have lasting consequences for European societies and cultures
  - Demographic Collapse alters social relationships
  - Position of church is altered – does religion become MORE lay-oriented?
- Did the Black Death tear apart the fabric of medieval society?
  - Boccaccio: ‘all respect for the laws of God and man had virtually broken down’
  - Collective trauma or ‘mental shock’
  - Many extreme reactions
  - Profound social and cultural upset

Terms

- Yersinia Pestis
- The Great Murrain
- Miasma
- St Roch
- John of Rupescissa