

A Historical Vignette (15)

“Be proud of yourself: you have a History!”

The nose and the plague

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Abstract. *The nose and the plague.* Although the plague does not cause any specific nasal pathology, the miasma theory and the repulsive smell of the disease were factors that contributed to a strong emphasis on the nose. To stop the spread of the disease, it was thought necessary to saturate the nose with protective scents (hence the nose of the plague doctors) (Figure 1), or simply to hold one’s nose. Moreover, the nose was long considered to be an outlet for mucus from the encephalon, and so induced nose bleeding and sneezing were advised when the plague seemed to be attacking the brain.



Figure 1

Figure 1. Photomontage showing a “plague doctor” wearing an enormous nose containing protective scents. In the background, an allegory of the plague: “Golconda” by René Magritte (1953).

“The nose was beak-shaped, full of perfumes and anointed inwardly with balsamic matter. There were only two holes, one on each side, at the place of the openings of the natural nose. But that is sufficient for breathing and for conveying, with the air that is breathed, the impression of the drugs contained towards the front of the beak.”¹

1. The Plague, a serial killer with a bad odour

... the corpses abandoned everywhere which are devoured finally by the scattered survivors, the great **pestilence** that requires the beautiful ladies of the court to hold their noses when they visit the handsome gentlemen of the army for a pleasure party (G. Duhamel, *Refuges de la lecture*, iv).

A long time ago, when traveling in Morocco, I stood on a small rise observing the works of a dyer whose multicoloured barrels gave off a terrible smell. Suddenly an Italian tourist cried out “*Que malodore! Que pestilencia!*” The memory of the dreadful plague and its legacy of fatal smells emerged here, still embodied in the language of this traveller.

- The French word **peste** (i.e. the plague) now persists where the English word *pest* in this sense has fallen into disuse (except in weaker meanings such as a pest, a person who pesters). Etymologically, *pest* is probably linked with the Latin adverb *pessum* meaning “in the bottom”, a word associated with the Latin noun *pes* “*le pied*” (the foot). *Pessum* also had a figurative meaning that is now seen in the French “*une perte*” (a loss), for instance in the expression *pessum ire*: “*aller à sa perte*” (to go on the road to ruin). This etymology allows us to understand the original sense of *pestis* as a contagious disease, an epidemic with a particularly fatal character. During Antiquity, *pestis* indicated every highly contagious and serious infection without any specific

character. We should be aware that a “*pestis*” in Antiquity or the Middle Ages was not necessarily the plague as we understand it today. In the case of the “plague” of Athens that led Pericles’ death in the fifth century BC or the “plague” during which St Louis died outside Tunis in the 18th century, the diseases in question may have been cholera or typhus. In addition, in veterinary medicine, the word *peste/plague* is still used today with the original meaning of “non-specific mortal epidemics”, and not to designate the “plague” in the sense used in human medicine today. A current example of this usage can be found in “avian plague”, which is caused by a virus and not by Yersin's bacillus.

- The plague was also connected with the word **fléau** (a scourge). That word came from Latin *flagellum*, a whip. It indicated “a thing seeming to be the instrument of the divine wrath”. This idea is also concealed in the etymology of the English word **Plague**, which comes from the Greek *πληγή* (“*plègè*”), through Latin *plaga* meaning a stroke or blow.
- The word **pestilence**. In Latin, *pestilentia* had the same meaning as *pestis*. In Antiquity, apparently, neither of these two words had the connotation of a bad smell. In Old French (12th century), both words were used with the same meaning (“plague”), as in Latin. But from the 13th century onwards, *pestilence* in French acquired the supplementary sense of “foul smell, putrid miasma”. The observation of the terrible smell of the corpses affected by plague, during the

epidemics of the time, can probably explain that secondary meaning. Today in French, that secondary meaning persists alone: the sense of a dreadful smell.

2. The Miasmas

Homais ... was laden with a stock of camphor, of benzoin and aromatic herbs. He was also carrying a large jar full of chlorine water to expunge the miasmas (Flaubert, *M^{me} Bovary*, III,IX).

The word **miasma** was very frequently used to designate the plague and it is important to understand its meaning well. The word comes from the Greek *μῆσμα* (*miasma*), meaning “the stain caused by a murder”, which in turn was derived from the verb *μιαίνω* (*miainō*): “to dye” in Homer (a curious coincidence with the situation described above in Morocco!) and then “to soil with blood, sometimes with dust or tears”. Other derived words attested to the pre-eminence of the notion of murder: namely the stain of the blood that has been shed. Finally, *μῆσμα* also had the religious meaning found in the tragedies: the sense of profanation, of sacrilege.

None of this is found in French. The word was introduced to mean the effluvia (impalpable particles) to which infectious diseases were attributed before the discovery of microbes. Miasmas were not therefore specific to the plague and could be associated with other infectious diseases such as malaria. At the very beginning of the 19th century, *miasma* had the more general sense of “emanations, gases dangerous to health produced by the decomposition of

animal or vegetal matter”, the sense that now prevails in English. Finally, in the middle of the 19th century, by extension, *miasme* came to mean a “disagreeable and unhealthy smell”.

The origin and the modus operandi of the miasmas. Miasmas could come from diverse sources: first from plague patients through their sweat or faeces, then from their corpses, abandoned due to the shortage of graves. Climatic conditions were another source, an example being warm and humid air, which favours the rapid putrefaction of corpses. This phenomenon could be aggravated where there were large numbers of corpses, for instance after a battle or a shipwreck. Stagnant water, marshes, sewers and wells produced miasmas that formed clouds, which could fall again in the form of rain, contaminating the plants. The nose was a privi-

leged pathway for the miasmas on their way to the lungs and then onto the heart, the seat of life. The miasmas passed also directly to the brain through the nose. Finally they could penetrate through the pores of the skin, particularly if they were opened² subject to the influence of warm baths.²

3. The use of the protective perfumes (Figures 2,3,4)

When we entered the house of the Moroccan, we were enveloped by a cloud of oriental fragrances: the sweet and penetrating perfume of the rose water went to our heads and reminded us of the mysteries of the harem and the marvels of the Thousand and One nights. (T. Gautier, Voyage en Espagne, p. 281).

At that time, disinfection was called *parfumage* (the act of perfuming). The perfumes were

applied using different methods. Paré gives us the details:

In the town

Magistrates and police officers were required to ensure that, as in Hippocrates’ time, fires were lit to purify the air and that fragrant things like turpentine or broom were thrown on the embers. In the same way, as in Tournai, soldiers placed gunpowder without cannonballs into artillery, loosing off shots to eliminate the contamination in the air with the smell of the smoke.²

In dwellings (Figure 3)

The air had to be waved around the patient with a fan or with a big linen sack soaked in water with vinegar and attached to a long stick. The room was perfumed with aromas: incense, myrrh, benzoin, laudanum, styrax, roses, leaves of myrtle, lavender, rosemary, sage, basil, savory, wild thyme, marjoram, broom, pine



Figure 2. A physician feels the pulse of a plague victim, while holding to his nose a sponge impregnated with vinegar, “Fascicul Medicine te Antwerpen”, 1521.

Figure 3. Appliance for fumigation used during the plague. Hôtel Dieu Museum of Lyon. The word “perfume” contains the word *fume*!

Figure 4. The plague victims of Jaffa, by Jean-Antoine Gros, 1804, Louvre.

cone, small pieces of pine tree, cloves... A billy goat had to be kept at home because his smell prevented the pestilent air from settling there (in accordance with the proverb “one bad smell chases away another one”). In the summer, the room had to be sprinkled with cold water mixed with vinegar or with rose water if the patient was rich.

Near the mouth and the nose

In Montpellier, the physician Bernard de Gordon recommended keep a sponge soaked with vinegar or a small bag full of herbs in front of the mouth and the nose.

Paré advised holding a sponge in the hand because “*it contained better than anything else the virtues and spirits of aromatic and odoriferous things to be sniffed at with the nose by keeping them near the mouth*”. For instance, “*soak for one night in strong vinegar and brandy: rue, lemon balm, rosemary, scordium, sage, absinth, cloves, lily of the valley, saffron, root of angelica* (Figure 2). *Then take a sponge soaked or moistened in the aforesaid water. Now the patient will be able to hold in his hands a sponge soaked*

in rose water, rose vinegar, cloves, a little crushed camphor and he will have to smell it often”²

On the painting “the plague victims of Jaffa” (Figure 4), Bonaparte touches the bubo in the armpit of a plague victim, evoking the famous gesture of the kings of France. The officer standing to Bonaparte’s right is holding a handkerchief soaked in a protective liquid to his nose and mouth. The painting was commissioned by Bonaparte himself. On his return from Egypt, Vincent Denon instructed the painter Antoine-Jean Gros, who made the painting in Paris in 1804. The episode dates from 1799 and the painting is in the Louvre. The truth of the scene was disputed. Some claimed that the general was very helpful to the sick. Others, on the contrary, spread the rumour that he ordered the physician Desgenette to give opium to about seventy plague victims to hasten their death and to break the vicious circle of contagion...

Finally, in a mask

One of the characteristic features of the dress worn by plague doctors.

4. Charles Delorme and the nose of the plague doctors (Figures 5,6,7,8,9,10)

... the carnival of the masked physicians of the black Plague... (Camus, La Peste, p. 52)

Charles Delorme (1584-1678), who was physician to Louis XIII, and then to Louis XIV, was a very fashionable doctor (Figure 11). Henry IV said that *le jeune Delorme gentilhommeit la médecine* (“the young Delorme made medicine gentlemanly”). He put Bourbon l’Archambault on the map as a spa town and the city still has a “Charles Delorme Square”. He was an advocate of antimony and he used it as the basis for “Delorme powder” that was used as a purgative. Mme de Sévigné used it for her “vapours”. Delorme’s rival, Guy Patin, said that “he purged too much”.

Delorme was also the inventor of a “red stock” that was a major success. It owed its name to the colour of the roots of sorrel it contained. According to some, Delorme was the “greatest charlatan of his century”.



Figure 5. Plague doctor, museum of the *Hospices civils* of Lyon. The model dates from the 17th century.

Figure 6. Plague doctor. Frontispiece of J.-J. Manget’s “*Traité de la peste recueilli des meilleurs auteurs anciens et modernes...*”, Geneva, Philippe Planchi, 1721.

Figure 7. Plague doctor: Doktor Schnabel von Rom (“Doctor Beak of Rome”); engraving by Paul Fürst after J. Columbina, Rome, 1656.



Figure 8. A watercolour of a physician's mask with a sort of cape; lazaret of Venice, late 17th/early 18th century.

Figure 9. Plague doctor. Caricature by J. M. Füsslin, 17th/18th century.

Figure 10. Plague doctor. Carnival mask, Venice.



Figure 11. Charles Delorme, physician of the faculty of Montpellier (1584-1678).

He is also credited with the idea of the famous protective suit used during the plague epidemic that afflicted Paris in 1619: *“he had a suit made for himself in morocco leather that the air penetrates with much difficulty. He placed garlic and rue in his mouth, incense in his nose and the ears, covered his eyes with spectacles, and dressed in this way he attended the sick... he never forgot his dress... with a mask in the same morocco leather to which he had attached a nose half a foot long to divert the malignancy from the air.”*³

Leather probably constituted a useful barrier against the fleas, a fortunate coincidence because the role of the fleas in the transmission of the plague was only known at the very end of the 19th century.

1. A mask of this type was found in a lazaret of Venice, dating from the 17th/early 18th century. It is made of a sort of supple oilcloth coated with a yellow matter with the colour and the flexibility of diachylon: the beak is made of bronze and is composed of two lateral wings closed with wire netting in which aromatic substances were placed. It was probably located in the Institute of Hygiene in Rome until 1900, where a certain Dr. Sambon made a watercolour of it⁴ (Figure 8).
2. An engraver from Zurich, a certain Jean-Melchior Füsslin (1677-1736), made an engraving showing a caricature of a plague doctor with two small clouds of odoriferous vapours come out from his nose. One would be tempted to attribute these to concealed inhalators in

the nasal prominence of the physician! (Figure 9).

3. The nose of the plague doctor also has a place in the realm of fantasy. This is probably a joke intended to ward off the memory of the plague that ravaged Venice at the end of the Middle Ages. The suit of the plague doctors is sometimes attributed more to the Italians than to the Frenchman Delorme (Figure 10).

5. The iconographic tradition of the held nose (Figures 12,13,14, 15,16,17)

- In the Bardi di Vernio chapel in the Santa Croce church in Florence, there is a fresco by Maso di Bianco dating from about 1340. This follower of Giotto depicts the miracle of St Sylvester, a pope of the 4th century. The latter succeeded in defeating a dragon hidden in the bottom of a pit who was blamed for the slaughter of 300 men a day. Sylvester tied up his jaws with a thread! **At the time, the dragon was the symbol of the plague.** Moreover, the



Figure 12. “The miracle of St Sylvester”, by Maso di Bianco, Florence, 1340. See also Figure 17.

Figure 13. “The triumph of Death”, by Buffamalco or Traini, Pisa, 1350.

Figure 14. “The Pestilence”, by Gaetano Zumbo, Firenze, 1680-1700.

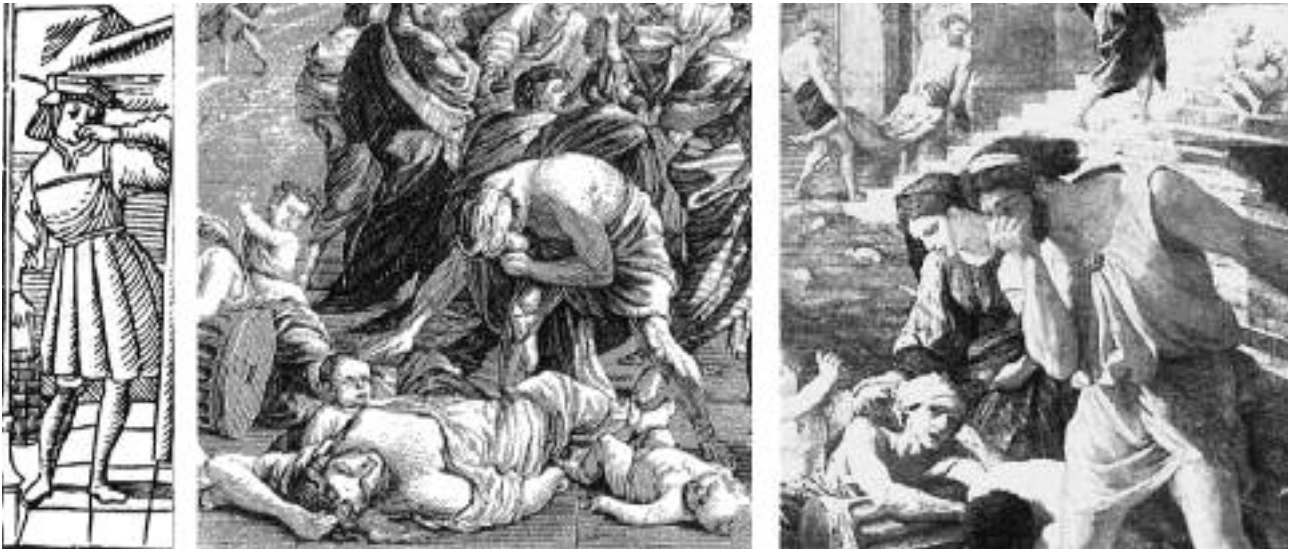


Figure 15. Minor character holding his nose at the side of the physician taking the pulse of a plague victim. “Fascicul Medicine te Antwerpen”, 1521 (see also Figure 2).

Figure 16. Two fragments from the “*Peste des Philistins*” or “*Peste d’Ashdod*” by Nicolas Poussin, Paris, 1630.

character shown here is holding his nose against the miasmas. We believe that this painting is the first example of the iconographic tradition of the held nose associated with the plague (Figures 12,17).

– The fresco “The Triumph of Death” can be found in the Campo Santo of Pisa. It is a painting by Bonamico Buffamalco, or possibly Francesco Traini. The work dates from about 1350. The gesture is the

same. A few yards away from the knight, we see open coffins containing plague victims (Figure 13).

– Antonio Zanchi painted “The Plague in Venice” in 1666. Here, we see a man holding his



Figure 17. Illustration showing St Sylvester's miracle, according to the golden legend of Jacques de Voragine. At the bottom of a pit, St Sylvester is tying together the jaws of a dragon, an emblem of the plague in Roman-Byzantine monuments. The repulsive breath of the dragon is shown by the way in which the religious figure on the right is gripping his nose (Maso di Bianco, chapel of Bardi di Vernio, basilica Santa Croce, Florence, 1340). This is probably the oldest expression of the iconographic tradition of the blocked nose associated with the plague. In other versions, the dragon is thought to be the symbol of the year reaching its end. The number of the stairs descending to the pit was not about 40, as in the golden legend, but 365, so that St Sylvester's Day was 31 December.

nose. A sketch of the painting can be found in the Kunsthistorische Museum of Vienna. The painting was intended for the wall lining the stairs of the Scuola Grande di San Rocco, a saint who provided protection against the plague in Venice.

- “The Pestilence” is a coloured wax model by Gaetano Zumbo (Museo di storia della Scienza, Firenze). It was made between 1680 and 1700. We see here a street cleaner, the *monatto*, whose nose is protected as well as might be with a piece of cloth. He is advancing with

difficulty among the corpses, carrying the body of a plague victim (Figure 14).

- In 1630, inspired by a drawing by Raphaël that has since been lost, Nicolas Poussin made “The Plague of the Philistines” or “Plague of Ashdod” (Louvre). We see two characters holding their noses near the bodies of plague victims (Figure 16).

6. The nasal outlet as a therapeutic agent for the plague

Spontaneous nosebleeds during the plague were generally considered

to indicate a very poor prognosis. By contrast, from a therapeutic point of view, nosebleeds were actually pursued in some cases.

- We have texts describing the poor prognosis associated with nosebleeds. For instance, in the Decameron, Boccaccio wrote that, in the East, nosebleeds were a sign of a fatal outcome: “the disease ... in the East, where bleeding from the nose was the clear sign of an inevitable death”.⁵

Michel de Nostredame (Nostradamus), when he had went to

treat the plague in Aix en Provence, noticed that those whose noses began to bleed died rapidly: “*In the year 1546 when I was elected and hired in the city of Aix en Provence... where the plague was so intense and terrible... Several patients, who had the marks of the plague, a carbuncle behind the shoulder or before their breast, were subjected to a violent nosebleed that lasted night and day, and they died.*”⁶

- By contrast, a few years later, in 1585, Paré wrote that if Nature could not evacuate the venom of the plague that reached the brain, patients would suffer from headaches because of the congestion of blood in the brain and the presence of putrid vapours. **Bleeding was then beneficial, particularly at the level of the nose.** Bleeding was also used at the level of the head, either from the temporal arteries or the cephalic vein on the most painful side. To induce a nosebleed, the patient had to blow his nose, scratching the inside of his nostrils or pricking his nasal mucous membranes with a pig bristle, all while maintaining the head in a forward and downward position. Sometimes, in favourable cases, the nosebleed would occur

spontaneously and it was advised to allow the blood to flow spontaneously, albeit within certain limits. Indeed, if the loss of blood was too great, intervention was required by introducing into the nose a cotton plug ... or some restrictive matter made of hair from the region between the thighs or from the breast of a rabbit ..., sealed earth incorporated with plantain juice...

- **Sleep through the intermediary of the nose.** Finally, if the headaches persisted and if the poor patient could not sleep, a handkerchief was positioned at the level of the nostrils. It was soaked in sleep-inducing drugs: crushed poppy flowers, henbane, water lily, mandrake or camphor dissolved in vinegar and rose water.²
- In order to achieve the opposite of induced sleep, **the induced sneeze** was also useful to *spur the animal faculty, to stimulate it to defend itself and to expulse the vapours* (miasmas) *molesting the brain*. To induce a sneeze, *a feather or a caustic powder like hellebore, euphorbia, pepper, mustard, or other similar middle for sneezing* was introduced into the nostrils. Once again, it was important not to go too far because of the risk

*of exerting too strong an attraction on the brain, which could cause apoplexy, vertigo and other bad accidents.*²

References and Related Topics

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