Epidemics and Fear

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For centuries, the plague caused fear and panic. The term “bubonic plague” relates to ulcerated lymph nodes (the buboes) observed in the groin, armpit, or neck of the infected person. The plague was transmitted from rodent to rodent—and to humans—by fleas. Today, bubonic plague is treatable if diagnosed early, but the pulmonary (pneumonic) form of the infection still carries a very high risk of mortality (1).

Between 1347 and 1350, the plague, then known as the Black Death, killed more than 25% of Europe’s population (2, 3). Giovanni Boccaccio’s Decameron is based on stories of people who fled from plague-infested Florence.

In the 18th century, after a massive population shift to towns during the Industrial Revolution, squalid conditions in overcrowded cities became the breeding ground for epidemics. Cholera emerged on the Indian subcontinent at the beginning of the 19th century. In its second pandemic (1829–1852), 7000 people died in London amid mass panic. Cholera appeared in New York in 1832 and in South America in 1834. The third pandemic (1852–1861) severely affected Russia, and the fourth (1863–1875) reached Europe through Alexandria.

The story of the containment of epidemics is the story of the golden age of bacteriology and the subsequent development of public health systems. It was the time of Louis Pasteur, Robert Koch, and their pupils. Yersinia pestis, the plague bacillus, was discovered in 1894 independently by Kitasato Shibasaburō (1853–1931), who was a student of Koch then working in Japan, and Alexandre Yersin (1863–1943), a Swiss-born bacteriologist from the Pasteur Institute, who had worked with both Pasteur and Koch (3).

Public health measures were fundamental. In Britain, the Public Health Act was passed in 1848, and large projects were later initiated to improve cities. For instance, a new sewage system was constructed in London in the 1870s. In the US, the Act for the Relief of Sick and Disabled Seamen was passed by Congress in 1798, and the network of hospitals known as the Marine Hospital Service was established in 1870. In 1912, it evolved into the US Public Health Service (4, 5).

The story of Y. pestis resurfaced very recently with the publication of its genome in 2002 (6). Yet, there were 16 outbreaks of the plague between 2001 and 2010, mainly in Africa (1).

The painting in Fig. 1, entitled Plague, is by Arnold Böcklin (1827–1901). Böcklin was born in Basel, Switzerland, and led an itinerant life. He studied in Dusseldorf and early in his career visited Belgium and Paris. He traveled to Rome (1850–1857) and then resided for a period of time in Munich, where he became professor at the Weimar Academy. Böcklin went to Rome again in 1862 but returned to Munich and lived there until the outbreak of cholera in 1874, when he left again for Italy and established his studio in Florence. Later, he moved to San Domenico, near Fiesole (7–9).

Plague is a harrowing image. Death floats in the air, riding a repulsive bat-like creature in a plague-stricken city. Böcklin masterly created an atmosphere of fear. Note, for instance, the beautiful gold-embroidered dress of the woman in the foreground of the picture. By its contrast with the grim surroundings, the inclusion of this dress in the painting cleverly links the horrific scene to a comfortable affluent life.

Böcklin’s allegories were simpler than the works of the neoclassicists and were often strongly based in nature, like his iconic Isle of the Dead, painted in 1883. Because his paintings did not need sophisticated education to decipher, they appealed to a wide public. Böcklin became one of the most popular painters in German-speaking countries at the end of the 19th century (8). From an art historical perspective, he is an early symbolist. He belongs to the group of artists who distanced themselves from “literal” impressionism. Other pre-symbolist artists were Pierre Puvis de Chavannes (1824–1898), and Gustave Moreau (1826–1898). Later, Böcklin’s work influenced the surrealists, particularly Giorgio de Chirico.

Communicable diseases pose new challenges in the contemporary, highly mobile world. It is not a trivial issue. According to the WHO, there were 760 outbreaks “of potential international concern” between 2002 and 2005 (10). They are now seen as problems to be solved rather than unavoidable tragedies. Still, it is recognized that the management of such outbreaks

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must include science, public health measures, and—high on the priority lists—sophisticated communications geared to prevent Böcklin-like images from forming in the collective societal mind.

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References


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