

# The Black Death and Surviving Traditions in Medicine

*Josh Rosa*

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*Writer's comment:* What interests me most about the study of history is its way of tweaking one's sense of perspective. A consistent subtext to analytical history, relativisms of every kind—moral, social, philosophical, even physical—broaden our own perspective from the modern paradigm by reminding us that men and women of the past, by the billions, lived their entire lives while viewing the world in radically different ways. In effect, they each inhabited a completely alien world, never escaping the assumptions that we may be tempted to ridicule. Scattered throughout their assumptions, however, are the occasional links to our own modern worldviews, where the roots of modern science are found curiously entangled in ancient superstitions and magic. While studying medieval medicine in History 139A, then, I thought that the plague and its intervention in the development of medicine would be a compelling topic for a paper to focus on. Here we see a profoundly different way of viewing the physical world, but we also see the fundamentals upon which our own understandings are based.

—*Josh Rosa*

*Instructor's comment:* Three aspects of Josh's paper struck me: originality, research, and execution. I have been teaching about the Black Death for thirty years, but Josh's theme—the critical role of smells—was one I had not seen before. It took an exceptional act of imagination for Josh to see disease within this framework of medieval thinking. Insight alone is not enough for historians. Josh read many medieval works—about the Black Death and about medicine in general—to locate evidence for his interpretation. One of the paper's strengths is that support comes from a wide variety of sources, insuring that Josh was onto something of general importance for the period. Finally, Josh made a comprehensible and convincing case. One thing that distinguishes an excellent history paper from a good one is addressing alternative perspectives. For example, he provides arguments to rule out the more familiar notion that smells are just a sign of disease, thus strengthening his claim that odors were seen as causes.

—*Joan Cadden, History Department*

THE PLAGUE THAT STRUCK EUROPE IN 1347 was unprecedented in both quantitative and qualitative respects. Its dissemination throughout the continent was distinctly faster than the average disease and its mortality rate was distinctly higher. Moreover, the plague's tremendous cost to the population shook the faith that society had placed in traditional medicine. Various medical principles were abandoned while only the most trusted remained in practice alongside newer, more innovative ideas. The disaster that this epidemic dealt medieval Europe, then, provides modern historians with a gauge whereby the more ingrained aspects of fourteenth-century medicine are contrasted with the ones that expired, as well as grounds for speculation over the reasons for such disparities. The peculiarly olfactory element in the interpretation of disease, in particular, can be traced back across centuries and cultures, and is evidenced to have played an important role in medicine's approach to the plague. The reasons for its survival are veiled in the nature of disease, the specific conditions of the plague, and the way in which medical thinkers of the Middle Ages viewed the human body's relations with the outside world.

A multitude of theories promptly emerged to address the causes of the plague, and many had roots in earlier periods. The theoretical causes ranged from celestial events to irregular weather, to stagnant water, and even to earthquakes. What these theories all had in common was their accessory of "corrupted air" as a remarkably ubiquitous factor. Each of the aforesaid causes was believed to have corrupted the air in its own particular way and this corruption, typically identified as an offensive odor, was regarded synonymously with the plague. Offensive odors were not recognized as indications of a lethal agent, but were in fact identified as the lethal agent themselves. The degree to which urbanization outran the development of basic sanitation in this period undoubtedly produced an abundance of unpleasant smells. Surveying the plague about a century later, Bengt Knutsson attributed the plague to "stinking dead carrion and most of stinking waters where in many places water is kept two days or two nights," a sight that was probably familiar in medieval cities and even in rural areas (176). Decay and filth are cited as causes of the disease, but an important feature is the odor as a distinguished factor. To avoid illness, people were advised to "eschew every cause of putrefaction and stinking" (Knutsson 176). To detect an unpleasant smell in this period was more than an annoyance. It was a potentially fatal health hazard.

Medical thinkers therefore formulated scent-oriented methods to prevent illness by the plague. It was decided that since offensive odors produced in those who smelled them the plague's horrific symptoms, strongly pleasant odors would prevent those symptoms. John of Burgundy suggested that people carry ambergris or "other suitable aromatic" (187). Knutsson asserted that, "by the sweet odor of balsam the heart and the spirits have recreation" (176). Other recommendations included holding scented substances to the nose, a vinegar-soaked sponge in hot weather and rue and cummin in cold weather ("The Transmission of the Plague" 184). The general consensus appears to have been that pleasant scents, while not being particularly healthful on their own, had the capacity to overpower or cover up the offensive odors that were so harmful. No innate properties are mentioned, however, to account for the pleasant scents' preventative effect, and this accounts for the variety of recommended substances. Basically anything that was known to smell good, it seems, was advocated. Correspondingly, there is no mention of specific harmful agents contained within the offensive odors. In a period that far preceded a scientific understanding of microorganisms or viruses, it was generally assumed that most of nature's substances could be detected by one or more of the human senses. As the cause of illness, the role of modern germs within the air was occupied by the air's very smell and taste.

This perspective was not an invention responding to the plague and emphases on scent predate the plague by centuries, though with slightly different implications. Plague tracts make no mention of aromatherapies promising any special benefits outside the avoidance of the plague's infection, yet medical theories of earlier periods accorded dramatic and diverse potential to various scents. The twelfth-century writings of Abraham ibn Ezra, for example, recommend the inhalation of steam of frankincense and myrrh with nutmeg and ambergris, along with other substances, to facilitate a woman's pregnancy (227). And the scent of galbanum and fragrant clove is purported to aid an epileptic's recovery from a seizure (Abraham 153). Such ideas represent just one aspect of pharmacological testing in the medieval empiricist tradition. They were believed to work only through experience and observation and the only overarching rationale these ideas relied on was the prevalent assumption that scent influenced the body in powerful ways.

It is tempting to grant these thoughts a more refined interpretation. The modern perspective almost intuitively bears in mind airborne

particles and bacteria that can affect a person's health once inhaled, and remembers that specific odors can indicate the presence of such things. Scent, then, is considered a possible signal of a health hazard, and not the health hazard itself, and it is difficult to imagine a field of medical science that did not grasp this. Indeed, even at the height of the epidemic, some circles in medical scholarship insisted that air was always and consistently harmless until contaminated with a foreign substance. The medical faculty of the University of Paris issued a report in October of 1348 that claimed "air, being pure and clear by nature, can only become putrid or corrupt by being mixed with something else, that is to say, with evil vapors" ("The Report of the Paris Medical Faculty, October 1348" 161). This line of thinking points toward an inchoate understanding of invisible substances, such as germs, present in the otherwise benign air, with no regard to scent.

The question of whether this line of thinking reached such an understanding in the fourteenth century is slightly more ambiguous. Contemporary references to spiritual means of contagion, however, suggest that medical thought was still far from scientific. A Montpellier doctor wrote a treatise in 1349 proposing that death could be instantly transmitted by eye contact alone, thought which "the airy spirit leaving the eyes of the sick man" entered into the healthy one ("The Transmission of the Plague" 182). Compared to hypotheses of this kind, scent-oriented theory actually seems quite sound. Such thinking warned people to avoid filth, unclean conditions, and the breath of the ill, among other sources of offensive odors, and although the reasoning for this avoidance was somewhat dislodged from scientific fact, it still demonstrated some appreciation for the behaviors that were conducive to transmission. Whereas fear of eye contact was as useless in practice as it was in theory, fear of odors was at least a way of utilizing the human capacity to perceive an unhealthy atmosphere.

Perhaps the tendency to shape medical theory around this sensory capacity can be identified in the very basis of medieval medicine, as far back as antiquity. The *Isagoge*, a ninth-century Arabic work, describes a much older medicine as it was devised and promoted by Galen, a Roman physician in the second century, and expresses concerns that parallel the plague tracts that were written more than thousand years later. The *Isagoge* explains the danger of foul exhalations around marshlands that "change the air and give rise to disease and pestilence" (Hunain 144). Abraham cites Dioscorides, another ancient authority, in

his discussion of aromatherapies. Dioscorides recommends the scent of roots to assuage a toothache (185). As early as the second century, it seems, medicine ascribed to odor a special influence on health.

Of even more interest than the longevity of this mindset is its academic ubiquity, as it clearly crossed intellectual disciplines as well as centuries. Distinctive “medical sects,” as Galen defined them, grouped medical thinkers and their ideas into three main camps, namely the rationalists, the empiricists, and the methodists. The two icons of medical rationalism, Aristotle and Galen, advanced the notion that all matters of health were linked to a fundamental and universal design, including physical and natural laws that corresponded to each other and to other laws in a great system of interconnectedness. Opposed to this view was empiricism, an ideology to which Dioscorides subscribed. Dioscorides and other empiricists experimented with reactions between natural substances and their effects on health, and used what they learned, but never attempted to relate their cumulative knowledge to a grand scheme. In the empiricist opinion, no such scheme existed. Galen and Dioscorides were therefore diametrically opposed to each other in a significant way. Yet they both stressed the importance of air quality to health, and defined that quality by its odor. The olfactory consideration found a niche in both disciplines, despite the great rift between them. Hence, the consideration of odors must have been an incontrovertible necessity to educated medical thought, and remained undisputed throughout the Middle Ages.

While the plague shattered other medical beliefs, it only served to further cement the unquestioned status of scent-oriented medicine. The plague’s characteristic stink became legendary, as well as the massive death toll that accompanied it, so scent-oriented medicine seemed ideal to dominate medical theory. Bengt Knutsson believed that buboes, the dark swellings symptomatic of the plague’s infection, emitted the foul smell that must have lingered around the ill in great concentration, and that “the reek or smoke of such sores is venomous and corrupts the air” (175). Ideas such as this likely resulted from the sharp rise of offensive odors that undoubtedly followed the plague as it spread across Europe. Limited to one person, the plague probably caused no more stinking than the average disease of the Middle Ages, but its abundance and concentration, which reached unrivaled heights, made its stench astounding. Because its victims died so quickly and in such great numbers, many corpses were uncared for and produced extraordinary

odors, and thus, a particularly strong stench lingered at every site the plague ravaged. People noticed the correlation and drew conclusions from it. A German treatise that was probably written one generation after the initial outbreak observes that, "In all the places where the mortality has persisted for a long time, and still persists, there have been more fogs and stinks than in other years" ("Earthquakes as the Cause of Plague" 179). Producing said concurrences, the plague verified the idea that an offensive odor was a detriment to one's health.

Nevertheless, it is important to note that this idea remained but one facet of people's attitudes toward the plague. There is no evidence to suggest that this scent-oriented medicine was ever a distinct medical sect like rationalism or empiricism, before or after the plague. Rather it was one approach that different sects used according to their various tenets. Nor did scent-oriented medicine ever dictate solely exclusively the careers of physicians, as did astrology. One reason for this might be the divided opinion on the origins of the deadliest of odors. Geoffrey de Meaux, a French astrologer, attributed the odors that caused the plague to the conjunctions of stars and planets (172). Bengt Knutsson attributed them to falling stars (174). Still, others believed that earthquakes had released the "vapors and earthy fumes" that manifested in the symptoms of the plague ("Earthquakes as the Cause of Plague" 178). There was an agreement that odors caused the plague, but differing theories on what caused the odors. It is possible that similar disagreements about the origins of corrupted air preceded the plague and thus curtailed the development of a cohesive doctrine on the model of astrology or teleology. A potential 'scentology' or 'odorology' was too perforated by internal debate to ever reach a codified form of thought, but still colored the medieval mind's overall picture of the world and had an especially pervasive impact on medicine during the plague.

Medicine that focused on odor seemed engineered to treat the plague and the plague seemed engineered to validate medicine that focused on odor. Perhaps even more significant than scent-oriented medicine's apparent success in identifying the cause of the disease was its apparent success in responding to the disease. If this kind of thinking did not aid the recovery of infected patients, then the behavior patterns it prescribed at least helped others avoid infection. Because the scent of death was regarded synonymously with death itself, it was carefully avoided. Unsanitary situations were either sequestered or sanitized. And people were careful not to breathe the same air as the ill. It is

reasonable to assume that this behavior helped many people survive the plague and that it was recognized for it. Where scent-oriented medicine dominated responses to the plague, the streets were probably cleaner and the death toll consequently lower. Responses to the plague can be used a microcosm for the broader evolution of medieval medicine. Those who abided by this apparent superstition tended to survive disease. Perhaps, then, this aspect of medicine was of an almost modern quality, lacking the technology to understand and identify germs yet acknowledging the conditions they mean to health.

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