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The Black Death and the Transformation of the West

Edited and with an Introduction by Samuel K. Cohn, Jr.

the close of the Middle Ages. No scholar has contributed more effectively to this view than David Herlihy.[63]

ONE

Bubonic Plague: Historical Epidemiology and the Medical Problems

The Black Death of 1348 and 1349, and the recurrent epidemics of the fourteenth and fifteenth centuries, were the most devastating natural disasters ever to strike Europe.[1] We cannot cite exact losses; there are no global figures. The populations of some cities and villages, in areas as far removed from each other as England and Italy, fell in the late decades of the fourteenth century by 70 or 80 percent.[2] The more we learn of the late medieval collapse in human numbers, the more awesome it appears. Europe about 1420 could have counted barely more than a third of the people it contained one hundred years before.

This was Europe's greatest known ecological disaster,

It struck water at the Black Sea port of Kaffa, modern Theodosia, in the Crimea. The Genoese had founded the colony about 1266. A khan of the Golden Horde, named Yanibeg, besieged the town in 1343 and again in 1345–46. In a determined effort to take the town, he catapulted the bodies of plague victims over its walls. The Genoese hurriedly dumped these biological bombs into the sea. But the infection caught on.[13] In entering Kaffa, the disease broke onto the far-flung trading network of the Genoese. The coastline of the entire Mediterranean Sea now lay open to attack.

The now rapid diffusion of the plague through Europe followed a characteristic pattern. In a first phase, the plague leapt from infected port to one still uncontaminated. It then fell quiescent for a while, usually during the cold months of winter. Then, in a second phase, usually in the following spring, it invaded the hinterland and simultaneously moved by sea to the next accessible port. These again served as bases, for forays inland, and for farther leaps by sea.

The deadly cycle was renewed.

Thus, in 1347, plague leapt from Kaffa to Constantinople and then to Cairo and Messina in Sicily. A Byzantine observer noted its pattern of infesting first the ports, then the hinterland: “A plague attacked almost all the sea coasts of the world and killed most of the people. For it swept not only through Pontus, Thrace and Macedonia, but even Greece, Italy and all the Islands, Egypt, Lybia, Judea and Syria.”[14] From Messina, it was carried in early 1348 to Pisa, Genoa, Venice, Marseilles, and Barcelona, paused, and then moved like a well-drilled army forth from its maritime bases into the hinterland. It struck Florence in April of 1348; Giovanni Boccaccio, in the preface to the *Decameron*, has left a classical description of its devastation.

In the north of Europe, the plague reached Melcombe Regis, the present Weymouth, in the shire of Dorset in southwest England, in June of 1348. Apparently, it rode the merchant ships coming from the Gascon ports of Bordeaux or Bayonne, then under English rule.[15] Again it paused, smoldering over the winter. But in 1349 it flared with power, raged through Britain as far north as the Scottish highlands, and wrecked havoc on the eastern half of Ireland. Bubonic plague is today regarded as a tropical disease, but it had no difficulty crossing the waters of the North and Baltic seas, that is, the northern Mediterranean. Movement from port to port, respite, then invasion of the hinterland: the familiar pattern holds. Calais, Bergen, Cologne, Copenhagen, Lübeck, and Novgorod in distant Russia now caught the infection from incoming ships. And it advanced deep into the eastern part of the Continent. In 1352 it struck Moscow; both the grand duke of Muscovy and the patriarch of the Russian Church were counted among its victims. It swept still farther south, apparently as far as Kiev. Launched at Kaffa in the Crimea, and now attaining Kiev some 700 kilometers to the north, the plague almost closed a deadly noose around Europe.

Was this *Yersinia pestis*, bubonic plague as it is known through recent occurrences? Most historians think so. Many witnesses mention boils or buboes

found upon the bodies of its victims. For example, a Florentine chronicler, Matteo Villani, gives the following description of the Black Death:

> It was a plague that touched people of every condition, age and sex. They began to spit blood and then they died—some immediately, some in two or three days, and some in a longer time. And it happened that whoever cared for the sick caught the disease from them or, infected by the corrupt air, became rapidly ill and died in the same way. Most had swellings in the groin, and many had them in the left and right armpits and in other places; one could almost always find an unusual swelling somewhere on the victim's body.[16]

As buboes are the classic symptom and even give their name to plague, this now conventional diagnosis appears well founded.

But many puzzles remain. Perhaps the biggest puzzle touches on a characteristic of bubonic epidemiology which the sources do not mention. To my knowledge, not a single Western chronicler notes the occurrence of an epizootic, the massive mortalities of rats, which ought to have preceded and accompanied the human plague. Humans, in the classic bubonic epidemiology, can contract the disease only from a dying rodent; unless the rodents die, the human population remains untouched.[17]

Why were the medieval populations so vulnerable to these killing diseases? Many historians, dissatisfied with medical explanations, have looked to social factors to explain the catastrophic losses. Two proposed explanations have elicited much lively discussion. One is based on Malthusian principles, the other on Marxist.

The indirect evidence of overpopulation rests primarily on the history of cereal prices and the occurrences of famine. Basic foodstuffs were costly in the late thirteenth and early fourteenth centuries. One price list from Norfolk, from 1290 and 1348, shows there were nineteen years when wheat prices were so high as to indicate dearth and hunger.[42] In Languedoc between 1302 and 1348, the years of scarcity were twenty, nearly the same as the twenty-seven years of adequate food supplies.[43] More dramatic than price series in measuring population pressures against the food supply were the appearances of true famines. In northern Europe, a major famine, known traditionally as the "great hunger," persisted for three years, from 1314 to 1317. Famine struck also right before the Black Death, in 1346 and 1347, in both north and south. A Florentine, Giovanni Morelli, attributes the high mortality of the Black Death to famine the previous year. Not twenty out of one hundred people, he reports, had bread. The rest lived on herbs and vile plants; grazing like cattle, they filled the countryside. "Think," he explains, "how their bodies were affected."[44] In France, Simon de Couvin affirmed: "The one who was poorly nourished by unsubstantial food fell victim to the merest breath of the disease; the impoverished crowd of common folk died a welcome death, since for them life was death."[45]

Malthusian pressures against the food supply are very apparent in pre-plague Europe, as a huge population struggled to live on scant resources.

A final weakness of the Malthusian interpretation is its failure to consider divisions within medieval society, especially between rich and poor. Surely rich and poor were not subject to the dearth of resources in the same way. Marxist critics in particular have dwelt upon this omission, even as they propose their own explanation for the crisis of the closing Middle Ages.

Marxism makes the balance of classes and the class struggle the chief motor of historical change. Marxist historiography has been from its origins antagonistic to Malthusianism in any form. Exploitation, not overcrowding, explains human misery, and insurrection, not contraception, is the right response.

at a certain moment, which Bois dates to about 1315, the decline in per-family rents overcame the increase coming from the larger number of farms. From that moment on, the lords faced continuous shrinkage in the total revenues they collected. Bois calls this a “crisis of feudal rent,” and claims it engendered a crisis of feudalism itself.

The lords had to seek alternate sources of revenue. They took to robbery and pillage—the direct expropriation of peasant wealth. They also hired themselves out as mercenaries. And they pressured their overlords, notably the king, to wage wars against their neighbors. In war they hoped to capture a wealthy opponent, hold him for high ransom, and thus repair their fortunes.

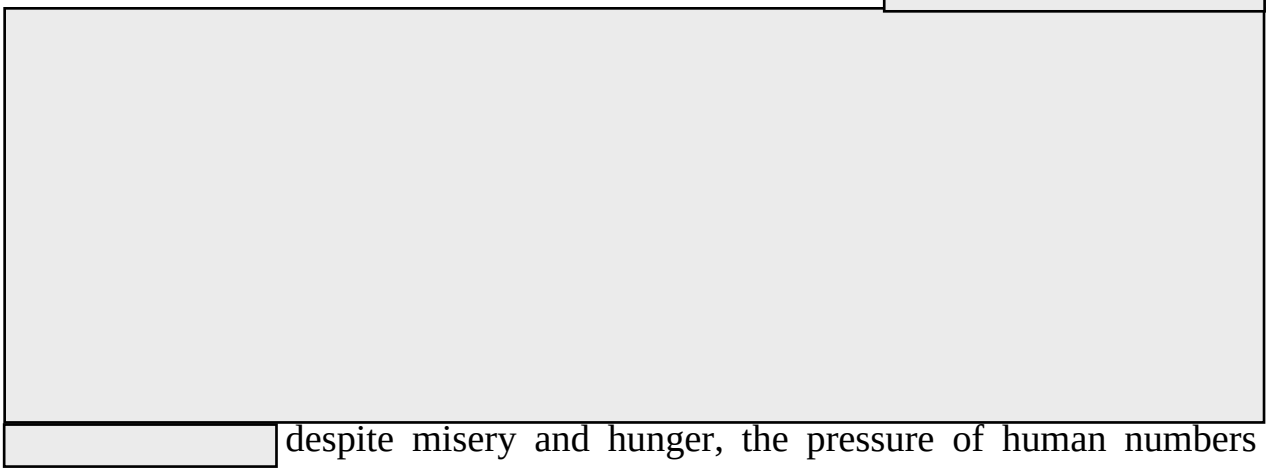
In sum, the crisis of feudalism provoked the interminable wars of the late Middle Ages, many of which were thinly disguised pillaging expeditions. But the waging of wars required that the king enlarge his powers and his fiscal resources. State taxes tended to replace feudal rents as the chief form of peasant expropriation. Military bands ravaged the countryside, and tax collectors took what the pillagers left behind. Little wonder, then, that the population collapsed, but this was the effect and not the cause of the crisis in feudalism.

Sensitive to class divisions, Bois’s model offers a complex, subtle, and illuminating analysis of late medieval social trends in eastern Normandy. But it does not seem to be as free of Malthusian influences as the author contends. The balance between population and land determines per-farm productivity and the level of rents. Pressures against the land—must we not call them Malthusian?—lower farm productivity and directly engender the crisis in feudal rent. That crisis might be considered a Malthusian reckoning in another form.

European population had grown to extraordinary levels during the central Middle Ages, but the result was not a Malthusian reckoning or crisis, but a deadlock. In spite of frequent famine and widespread hunger, the community in ca. 1300 was successfully holding its numbers. It is likely that this equilibrium could have been maintained for the indefinite future. It is likely too that the Malthusian stalemate might have paralyzed social movement and improvement. Then the plague struck. It appeared as an exogenous intervention; it owed its power not to social factors but to its still obscure nature. And it devastated Europe. But in spite of the havoc it wrought, it did a service to the West. It broke the Malthusian deadlock that medieval growth had created and which might have impeded further growth in different forms. It guaranteed that in the generations after 1348 Europe would not simply continue the pattern of society and culture of the thirteenth century. It assured that the Middle Ages would be the middle, not the final, phase in Western development.

TWO

The New Economic and Demographic System

Europe, before the Black Death assaulted it, was a very crowded continent. But despite the pressure on the land, stability prevailed.  despite misery and hunger, the pressure of human numbers went unrelieved. The civilization that this economy supported, the civilization of the central Middle Ages, might have maintained itself for the indefinite future. That did not happen; an exogenous factor, the Black Death, broke the Malthusian deadlock. And in doing so it gave to Europeans the chance to rebuild their society along much different lines.

The Church was traditionally suspicious of laymen and, in particular, of women assuming pastoral functions or administering the sacraments. In this instance, as plague thinned the cadre of priests, the bishop of Wells and Bath had no choice.

The legal systems of late medieval Europe also had to respond to the extraordinary social situation created by an epidemic. Under conditions of plague, certain “privileges,” as they were known in the legal language, went into effect.[7] Women, for example, could now serve as witnesses, and scribes not formally admitted into the guild of notaries could draw up legal contracts. Society needed certain services, and at these moments of crisis it had to allow even the unlicensed or people believed to be incompetent to perform them.

Over the long term, the relaxation of the pressure of human numbers

created serious problems for the economy. The chief problems were the drastic decrease in the number of workers, and the abbreviated span of years over which they remained productive. The plagues radically reduced the average duration of life. To the best of our knowledge, life expectancies in the good years of the thirteenth century were between 35 and 40 years.[8] The ferocious epidemics of the late fourteenth century cut that figure to below 20; after 1400, as the population achieved a new equilibrium at very low levels, it extended to about 30 years. These figures necessarily affected the balances between young and old, and also between producers and dependents.

Short years of service before death intervened, rapid turnover in members, wide recruitment of new persons, affected the quality of the product or service the professions provided. The new masters of the art were trained less rigorously, and would accumulate less experience, before passing away. We take an example of what we mean from careers in religion, the best illuminated of all medieval professions.

In the opening decade of the fifteenth century, a Dominican friar, Giovanni di Carlo, from the convent of Santa Maria Novella in Florence, lamented how the religious orders had fallen into decadence. The chief reason he gives for their plight was the flooding of their ranks with young men, without the piety or learning of their predecessors. “How painful it is [he remarks] whenever men have been trained for many years and with great effort, that they pass away in scarcely one hour. All that diligence, which men previously applied in preparing and supporting outstanding careers, is rendered vain and useless.”[12] The deterioration of skilled traditions was inevitable under conditions of high mortality—we shall see the pattern again in medieval cultural life. Europe at the time of plague, then, was a society reeling under repeated, powerful shocks; burdened with huge numbers of dependents; struggling with difficulty to

maintain its occupational cadres; struggling also to uphold the quality of its skilled traditions.

But, over the long run, the breaking of the Malthusian deadlock conferred advantages too. Above all it freed resources. The collapse of population liberated land for uses other than the cultivation of grains. It could be turned to pasturage or to forests. In the past mills and mill sites had served predominantly for the grinding of grain. They now could be enlisted for other uses: the fulling of cloth, the operation of bellows, the sawing of wood. Even as the population shrank, the possibility of developing a more diversified economy was enhanced.

Price movements provide our best evidence of the directions of long-term economic trends in the late Middle Ages. The immediate effect of the Black Death upon prices was to produce general inflation. The Florentine Matteo Villani, writing in 1363, presents an apt analysis of price movements since 1348:

> It was thought that, given the lack of people, there ought to be a wealth of all the things which the earth produces. On the contrary, through men's ingratitude an unprecedented scarcity affected everything, and this continued for a long time. In certain lands, as we shall narrate, there were severe and unprecedented famines. And again, it was thought that there ought to be wealth and abundance of clothing, and of all the other things that the human body needs … but the opposite happened … Most things cost two times or more what they cost before the epidemic. And labor, and the manufactures of every art and profession increased in disorderly fashion to double the price …[13]

This general inflation persisted until the last decades of the fourteenth century, and indicates that under the shock of plague production in town and countryside had fallen even more rapidly than the population.

Of all commodity prices, the most important, indeed the usual reference base for all others, was that of wheat. Wheat prices were everywhere high in

Europe before the Black Death, reflecting the huge numbers of consumers and the intensive cultivation of grain, even on marginal soils. Wheat prices also increased after the Black Death. In England, Normandy, the Ile-de-France, Alsace, Flanders, and Spain, they remained high until about 1375.[14] In Tuscany the period of inflation persisted even longer, to about 1395.[15]

After 1375 or 1395, the price of wheat enters a phase of decline that persists for a century. Commodity prices now differentiate in their movements, and wheat prices form the lower blade of an opening scissors. Other food grains remain relatively buoyant. The price of barley, for example, stayed comparatively strong. This reflects its use in the brewing of beer. Perhaps the melancholy induced by the massive mortalities whetted the taste for beer, but it surely indicates an improving standard of living, and the better and more balanced diet of the people. The price of animal products—meat, sausage, cheese and the like—also remained relatively high. Europeans, even as their numbers declined, were living better. Many moralists complain of the extravagant tastes for food and attire which the lower social orders now manifested. Matteo Villani remarks: "The common people, by reason of the abundance and superfluity that they found, would no longer work at their accustomed trades; they wanted the dearest and most delicate foods … while children and common women clad themselves in all the fair and costly garments of the illustrious who had died."[16] Conspicuous consumption by the humble threatened to erase the visible marks of social distinctions and to undermine the social order. The response of the alleged prodigality in food and clothing was sumptuary laws, which governments enacted all over Europe in the fourteenth and fifteenth centuries. They tried to regulate fashions, such as the size of sleeves or the length of trains in women's dresses; meals, such as the food to be served at weddings; or customs, such as the number of mourners who could attend a funeral. The repetition of these laws suggests their futility. High wages to the poor and improved living standards came to be irremediable facts of late medieval economic and social life.

The price of wool moved erratically, but was strong enough to stimulate a widespread conversion from plowland to meadow. Moreover, one or two shepherds could guard hundreds of sheep, and this extensive use of the land saved the costs of hiring expensive tillers. Manufactured products also held their value better than wheat. But in the late Middle Ages, silk challenged wool as the most active branch of the textile production, again indicating smaller, but richer markets.

Besides commodity prices, the costs of the classical "factors of production"—labor, land, and capital—also responded to the new conditions. Of these production costs, the one most dramatically affected was that of labor. The falling numbers of renters and workers increased the strength of their negotiating position in bargaining with landlords and entrepreneurs. Agricultural rents collapsed after the Black Death, and wages in the towns soared, to two and even three times the levels they had held in the crowded thirteenth century. In 1363, Matteo Villani acutely observed:

> Serving girls and unskilled women with no experience in service and stable boys want at least 12 florins per year, and the most arrogant among them 18 or 24 florins per year, and so also nurses and minor artisans working with their hands want three times or nearly the usual pay, and laborers on the land all want oxen and all seed, and want to work the best lands, and to abandon all others.[17]

Governments tried to cap the swell in wages and to shore up the shrinking rents. They sought to hold prices and wages to previous levels and insisted that workers accept any employment offered them. But they succeeded only in sowing discontent and in provoking social uprisings in city and countryside. The value of land diminished. We do not know a great deal of the costs of capital. But references in chronicles such as Matteo Villani's to the accumulation of inheritances suggests that capital too became cheaper in the contracting

community.

The different movements of factor costs favored a policy of factor substitution. In particular, cheap land and capital were widely substituted for expensive labor. In effect, the conversion of land from wheat fields into pasturage is an example of factor substitution, and many others could be cited. In agriculture, the purchase of oxen to aid the peasant in plowing and to increase his supply of fertilizer enabled him to work more productively. According to Matteo Villani, Tuscan peasants would not accept a lease unless the landlord provided oxen and seed—in other words, increased capital. In the urban economy, the substitution of capital for labor meant the purchase of better tools or machines—devices that enabled the artisan to work more efficiently. Frequently too, the policy of factor substitution involved technological innovation, the development of entirely new tools and machines. High labor costs promised big rewards to the inventors of labor-saving devices. Chiefly for this reason, the late Middle Ages were a period of impressive technological achievement.

New methods of reproducing the written word offer a clear instance of capital replacing labor by virtue of technology. The growth of universities in the twelfth and thirteenth centuries and the expanding numbers of literate laymen generated a strong demand for books. Numerous scribes were employed to copy manuscripts. At Paris, for example, in the thirteenth century, manuscripts were divided into quires and given to separate scribes, who assiduously reproduced them. The parts were then combined into the finished book. As long as wages were low, this method of reproduction based on intensive human labor was satisfactory enough.

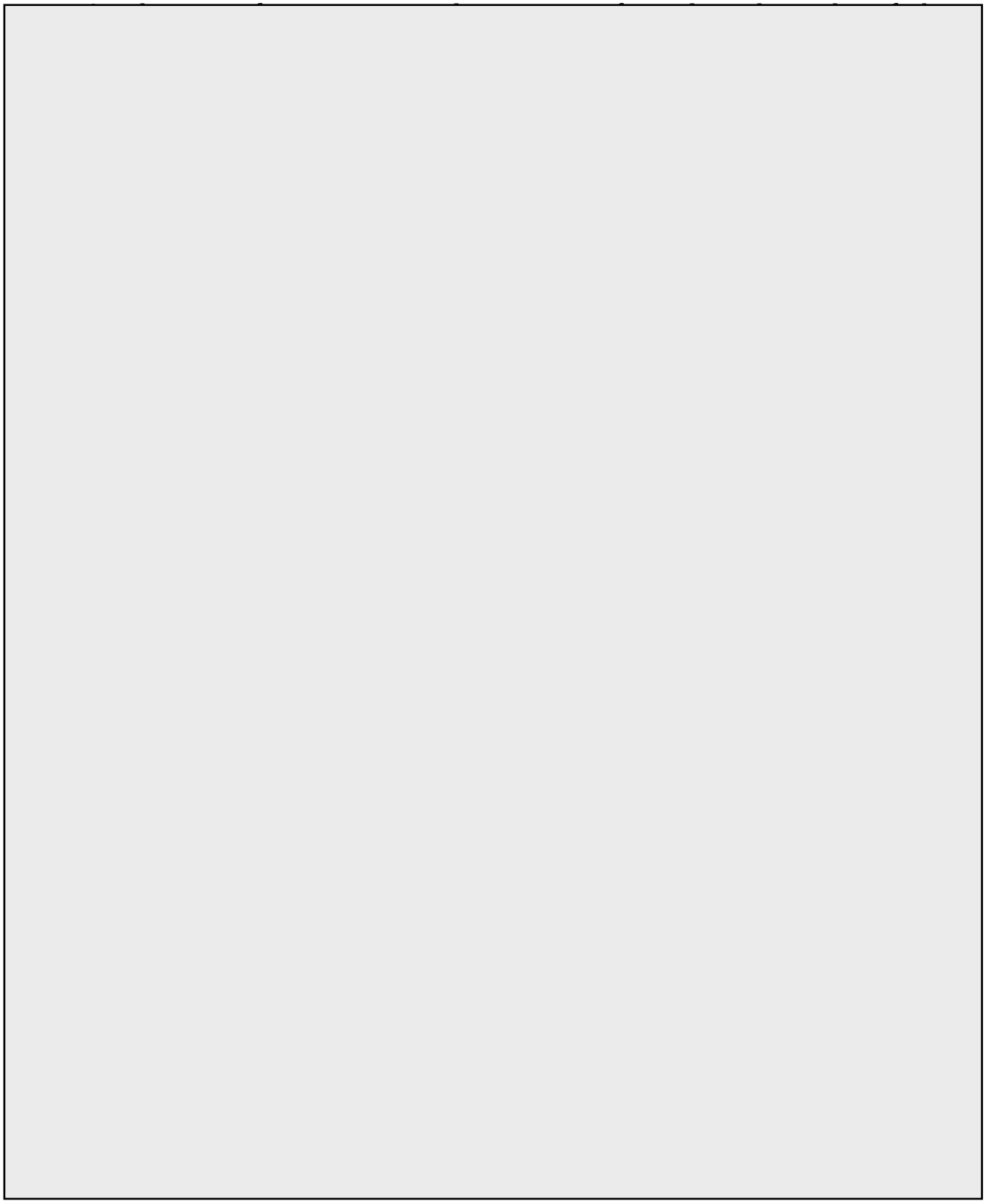
But the late medieval population plunge raised labor costs, and also raised the premium to be claimed by the one who could devise a cheaper way of reproducing books. Johann Gutenberg’s invention of printing on the basis of movable metal type in 1453 was only the culmination of many experiments carried on across the previous century. His genius was in finding a way to

combine several technologies into the new art. His family had long been associated with the mint of his native city of Mainz, and from this he gained familiarity with presses. He also was an engraver, and he needed that skill to cut the matrices for casting the type. He had to know metallurgy as well, and he successfully combined lead, tin, and antimony into an alloy that melted at low temperature, cast well, and remained strong in the press. Finally, he and all the early printers were businessmen. Printing shops required considerable capital to set up their presses and to market their books. But they were able to multiply texts with unprecedented accuracy and speed, and at greatly reduced costs. The advent of printing is thus a salient example of the policy of factor substitution which was transforming the late medieval economy.[18]

There are many other examples. There occurred a revolution in maritime transport. Its thrust was to produce bigger ships with smaller crews, able to remain long at sea and to sail directly from port to port. Here too, several new technologies affecting both ship construction and the navigational arts were combined to achieve this change. Capital was required as well, and also new business institutions, such as maritime insurance, to encourage and protect the big investments. Even firearms, another innovative technology of the age, can be interpreted in these terms. Soldiers too were commanding higher wages in depopulated Europe, and soldiers with firearms could fight more effectively than those without.

A more diversified economy, a more intensive use of capital, a more powerful technology, and a higher standard of living for the people—these seem the salient characteristics of the late medieval economy, after it recovered from the plague's initial shock and learned to cope with the problems raised by diminished numbers. Specific changes in technology are of course primarily attributable to the inventive genius of individuals. But the huge losses caused by plague and the high cost of labor were the challenge to which these efforts responded. Plague, in sum, broke the Malthusian deadlock of the thirteenth century, which threatened to hold Europe in its traditional ways for the indefinite

future. The Black Death devastated society, but it did not cripple human resilience.



The demographic system prevailing in medieval society appears to have been two-tiered. At the bottom of the social ladder, positive checks primarily controlled the numbers of the impoverished. Above this social sector were the middle classes and the wealthy, among whom preventive checks had become the more effective means of regulating numbers. In the Catasto of the city of Florence, dated 1427, wealth shows its characteristic correlation with household size, but, significantly, its influence becomes evident only above a threshold of approximately 400 florins in assessed household wealth.[31] Somewhere between 30 and 40 percent of the households fell below the threshold when wealth began to have a visible influence on household organization and demographic behavior. The demographic system operating in Florence in 1427 still looks to

be two-tiered, but now most households had passed under the control of preventive, not positive, checks.

The great population debacle of the late Middle Ages did not, in sum, introduce an entirely new demographic system. But it did redistribute the population between the two tiers of the traditional system. Depopulation gave access to farms and remunerative jobs to a larger percentage of the population. High wages and low rents also raised the standard of living for substantial numbers. They became acquainted with a style of life that they or their children would not want easily to abandon. For a significantly larger part of society, the care of property and the defense of living standards were tightly joined with decisions to marry and to reproduce. Presumably, these are the origins of the demographic system which Wrigley and Schofield find already functioning in sixteenth-century England. Out of the havoc of plague, Europe adopted what can well be called the modern Western mode of demographic behavior.

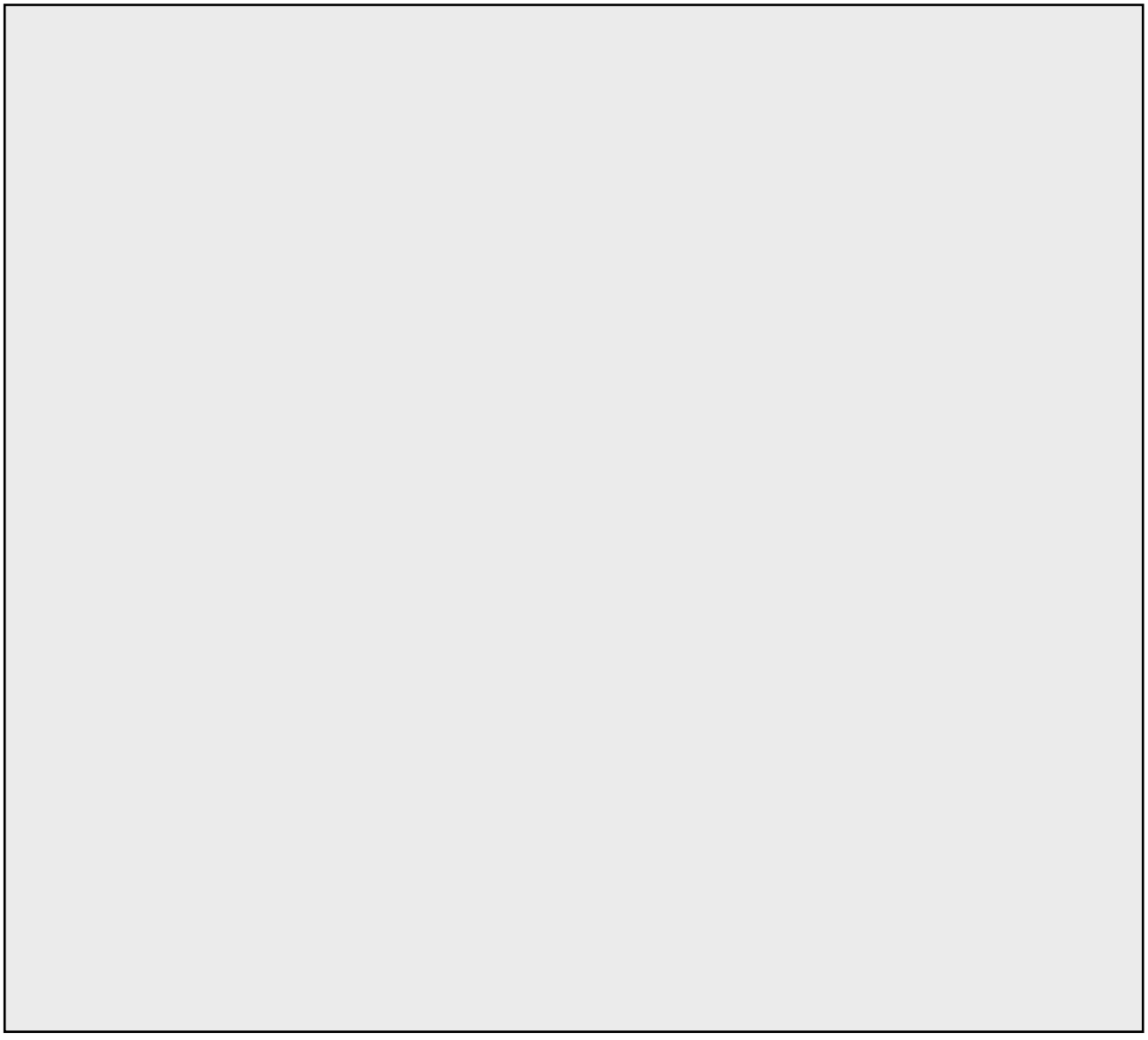
THREE

Modes of Thought and Feeling

The impact of the Black Death on the social and cultural life of Europe was similar to its effects upon the economy. Again we must distinguish between what it wrought in the short run, and what in the long. Its chief short-run effect was shock and social fissures, tears in the fabric of society which undermined social discipline and cohesiveness. In the long run, it threatened the quality and

continuity of cultural traditions. High mortalities thinned the ranks of the skilled, curtailed the duration of careers, and obstructed recruitment. The result was deterioration, but the decline also stimulated efforts at reform and renewal. In other words, decline was never so deep as to stifle awareness of decline.

We look first at shock and social fissures. The plague caused divisions between the healthy and the sick; between those in the cultural mainstream and those at its margins, namely, strangers, travelers, beggars, lepers, and Jews; and between the mass of society and its cultural leaders, its governors, priests, and physicians. These fissures cut across society in complex and at times pernicious ways, as we shall see.



Multiple and anonymous burials called into doubt all of the reassuring hope that each body was destined for resurrection. The plague incited a new tension between the living and the dead, even between the living and the sick. Like AIDS victims today, the sick had become the enemy.

A witness at Avignon relates in 1348:

> [Sick] relatives were cared for not otherwise than dogs. They threw them their food and drink by the bed, and then they fled the household. Finally, when they died, strong rustics came from the mountains of Provence, miserable and poor and foul-tempered, who are called gavots. At least, in return for big pay, they carried the dead to burial. No relatives, no friends showed concern for what might be happening. No priest came to hear the confession of the dying, or to administer the sacraments to them. People cared only for their own health [and that of their families]. It even happened that every day a dead rich man was carried to the grave with only a little light and by ruffians—none else followed the corpse but these.[5]

The second fissure induced by plague and panic divided those in the cultural mainstream from those at its margins. Relations with strangers, beggars, lepers, Jews, and others were always tense in medieval society, but not usually violent. Jews, for example, the largest cultural minority, long enjoyed the right, recognized by both Roman and canon law, to practice their religion free of interference. But the plague also discredited the leaders of society, its governors, priests, and intellectuals, and the laws and theories supported by them. These elites were obviously failing in their prime social function, the defense of the common welfare, in the name of which they enjoyed their privileges.

The terrible violence directed against Jews in 1348 and 1349 was itself a product of these combined rips in the social fabric. Early in 1348, the rumor arose that the Jews of northern Spain and southern France were poisoning the Christian wells, and thus disseminating the plague. Few recognized leaders of medieval society—no emperor, king, or Pope—gave credence to this absurdity. The physician Guy de Chauliac, for example, first mentions the rumor in 1348. The common people, he observed with evident contempt, variously blamed beggars or Jews for the disease's spread. In the same year Pope Clement VI, then at Avignon, tried to discredit the charge in a bull, calling the accusation "unthinkable." After all, he argued, the plague was raging in regions of the world

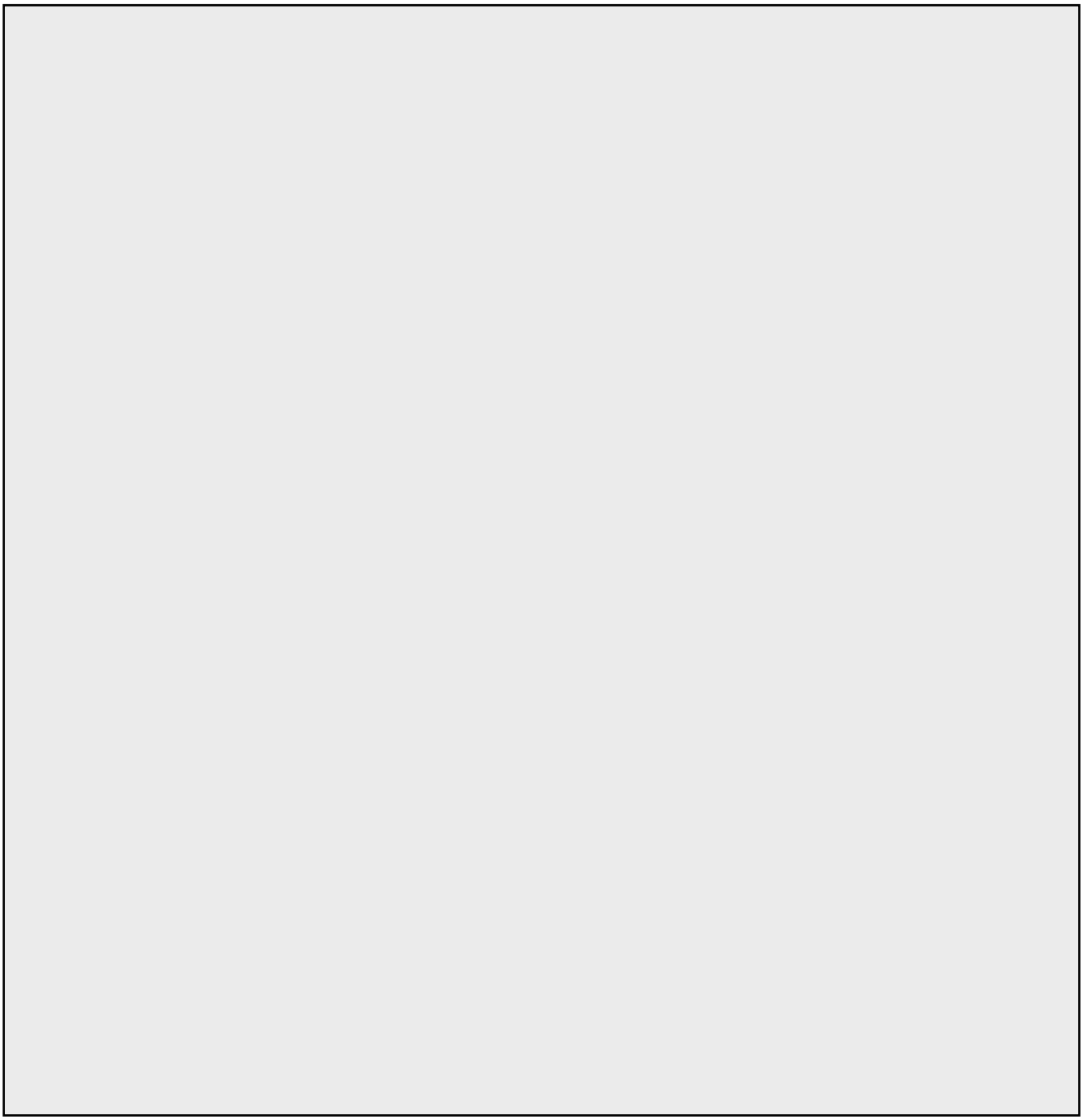
where no Jews were present; and in regions where they resided, they too were its victims. We do not know who launched and sustained the libel; but they were believed, not physicians and popes.

Eliciting the same kind of response in another quarter, the plague undermined confidence in the Church's spiritual leadership. Many spontaneous religious movements arose in the aftermath or even in anticipation of epidemics. Over some the Church was able to maintain an uneasy control, but others mounted a direct challenge to its monopoly over spiritual direction.

But the epoch of epidemics also witnessed a plethora of new foundations, of both colleges and universities. There were several reasons for this expansion of institutions amidst collapsing human numbers. The depletion of the ranks of the clergy gave deep concern, and the universities were the ones that supplied the leading clerics. Travel was, as we have mentioned, regarded as dangerous, and a local university saved the students from the risks of long journeys to distant schools. Finally, the many deaths produced a great flood of pious bequests, and many of those benefited poor scholars, future priests, and the institutions that trained them.

Thus Cambridge University acquired four new colleges, the foundations of which can be associated with the Black Death. Gonville was established between 1348 and 1351; Trinity Hall, in 1350; Corpus Christi, in 1352; and Clare Hall, in 1362. Oxford acquired two new colleges: Canterbury, in 1362, and New College, 1372. Even more dramatic was the proliferation of new universities on the Continent. In 1348, Emperor Charles IV, expressing concern for the decay of

learning, granted a charter to the new University of Prague, which still today bears his name. It attracted many Czech and German students, who formerly had to travel to Bologna or Paris. Universities were established at Vienna and Cracow in 1364; at Fünfkirchen in Hungary in 1367; and at Heidelberg in 1385. In sum, all the universities east of the Rhine and north of the Alps were founded after the onslaught of epidemics. Most of the authorizing charters mention the shortage of priests and the decay of learning as the reasons for their foundation.



The universities taught the principles of Galenic medicine inherited from the ancient world and received primarily through the mediation of the Arabs. Disease was a disturbance in the balance of the four humors. Galenic medicine had no clear theory of contagion.[18] But observers of the Black Death had no doubt of its contagious nature. Confidence diminished in the assumption that the ancients had said it all. In 1377, the town of Ragusa (present-day Dubrovnik) required that arriving ships, their crews, passengers, and cargoes, be kept for a certain time in isolation, to make sure that plague was not traveling with them. This was the origin of what came to be known as the quarantine. The name is Venetian, but sooner or later all Europe's ports adopted similar measures. No one now was doubting that plague was contagious.

The road to modern medicine had scarcely been entered, but the first steps were taken.[19]

In philosophy, the major trend in late medieval schools was a critical attack upon the great philosophical systems developed in the immediate pre-plague period. Thomas Aquinas, who died in 1274, can here serve as an example. This great Dominican had argued that the universe possessed an underlying order, and that the human intellect could achieve at least a partial understanding of its structure. His late medieval critics, called conventionally nominalists, claimed that he was wrong on both counts. The human intellect had not the power to penetrate the metaphysical structures of the universe. It could do no more than observe events as they flowed. Moreover, the omnipotent power of God meant in the last analysis that there could be no fixed natural order. God could change what He wanted, when He wanted. The nominalists looked on a universe dominated by arbitrary motions. Aquinas's sublime sense of order was hard to reconcile with the experience of plague—unpredictable in its appearances and course, unknowable in its origins, yet destructive in its impact. The nominalist argument was consonant with the disordered experiences of late medieval life.

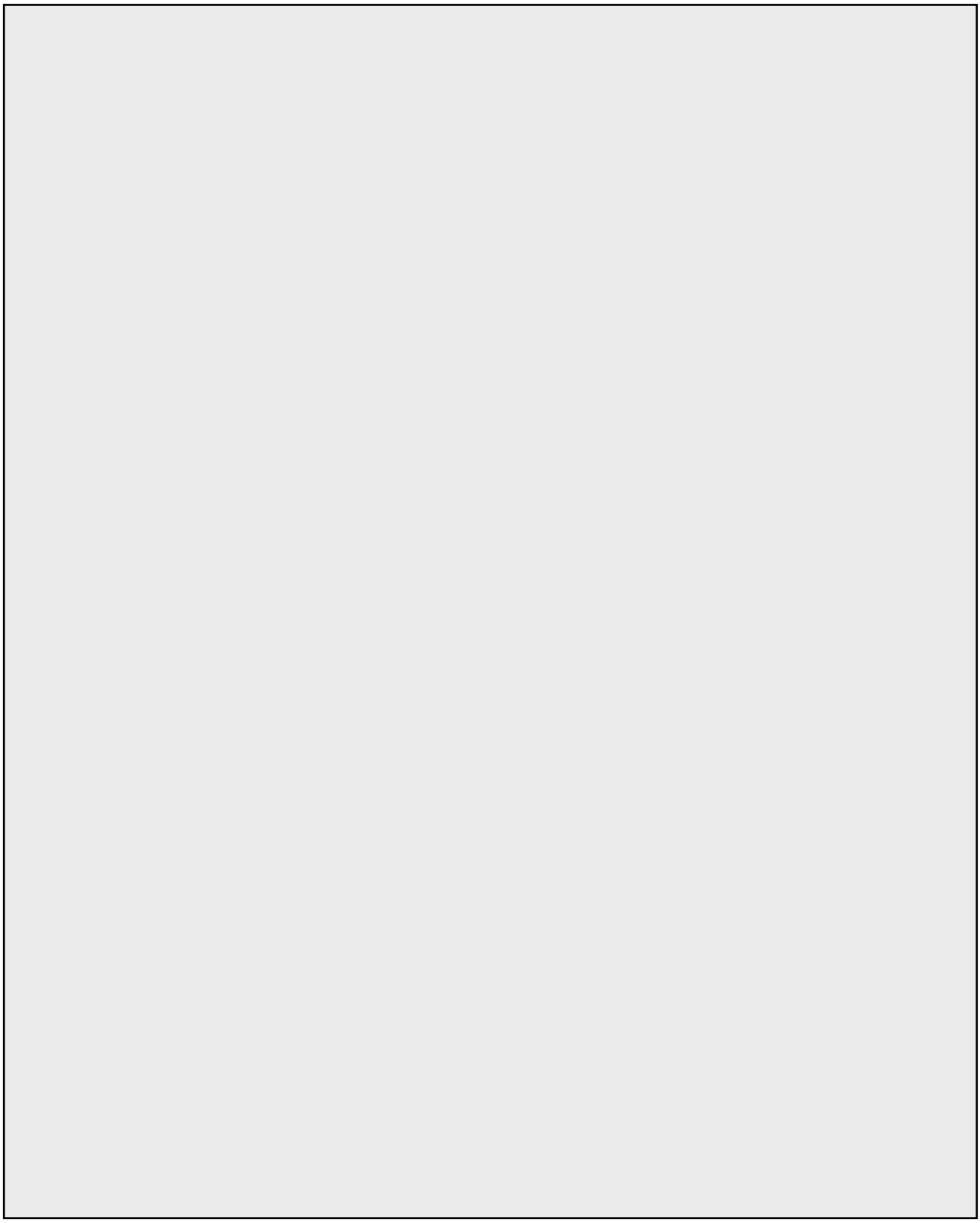
Finally, we consider how plague affected the religious sensibilities of the Middle Ages, not on the level of formal theology but in the beliefs and practices of the people.

With celestial patrons associated with only one out of five Florentine males, it does not appear that the cult of saints had much appeal in the city or the countryside even as late as 1260.

But a dramatic change occurred over the immediately following generations, amounting to a veritable revolution in the choice of Florentine names.

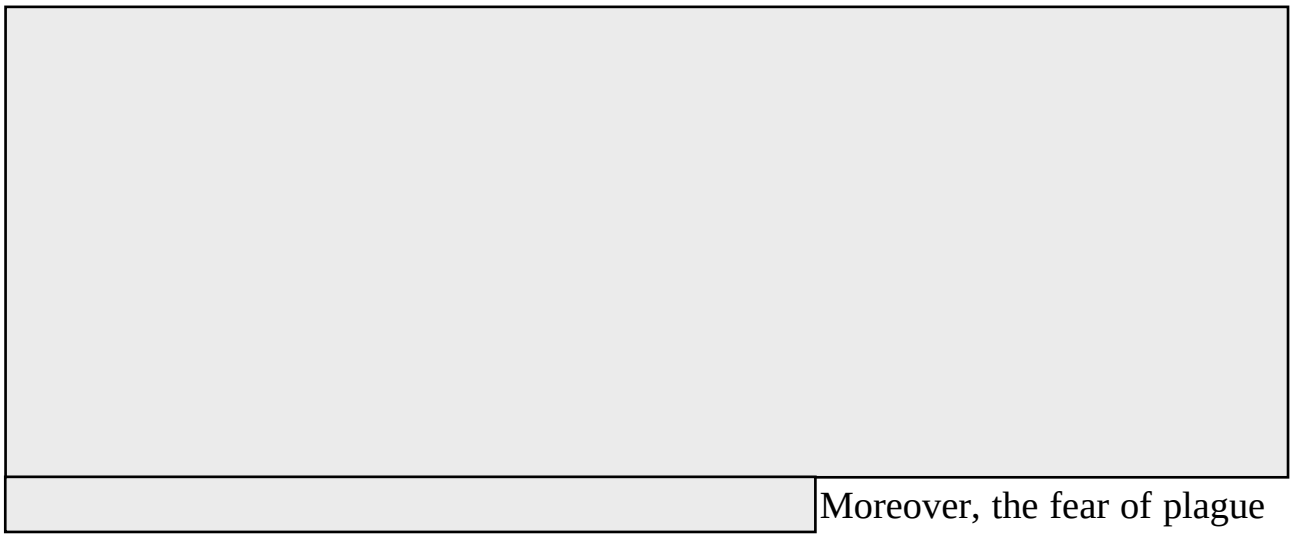
. Of the twenty most common names in 1260, only five are still found in that category in 1290-1350. They are Giovanni, now holding first position; Iacopo, reduced to third; Filippo, advancing from thirteenth to eighth; and Bernardo, falling from fourteenth to nineteenth. Significantly, four of the five survivors are religious names; only Neri in twelfth place is not. They are joined in the top twenty by other religious names: Piero, who had not registered even five appearances in 1260; Francesco, altogether missing from the earlier survey; Andrea, which previously had been far back in

the count, in sixty-eighth position. Among the top twenty, names associated with a saint show an increase from four in 1260 to 13 in the pre-plague generation.



the chief of the plague saints was a man, though it is not sure whether he really existed. This was St. Rock. He was supposedly born about 1295 at Montpellier, where his father was ruler of the town. The infant bore a red cross on his breast, and on Wednesdays and Fridays refused to nurse more than once a day in honor of the Virgin. As a young man, he distributed his wealth among the poor and embarked on a pilgrimage to Rome. The plague was raging in many places on his journey, but he cured the buboes by his touch. He contracted the plague himself at Piacenza and was expelled from the town. He returned to Montpellier, where he was imprisoned as a spy; he died there in 1327—well before the plague had actually entered Europe. He seems to have gained his reputation as healer in 1414, when he was credited with saving the Council of Constance from infection. Late in the century, a Venetian humanist and governor of Brescia named Francesco Diedo wrote down his legend. Iconographically, St. Rock is presented with his pilgrim staff and purse, and often with a dog; he points to a plague boil on his inner thigh.[34]

The frantic search for celestial protection affected other religious practices. Princes and the wealthy amassed treasuries of relics, which they hoped would guard their health. In their wills they called for Masses to be sung for their souls in what seems preposterous numbers—sometimes in the thousands, as if heaven could be forced open if enough Masses were piled up at the gates. French scholar Jacques Chiffoleau calls this mania for numbers "heavenly accounting."[35] He associates this quantitative bent with the emergence of the calculating mind of the modern world. The argument is not altogether convincing. But there is no doubt that fear of an untimely death profoundly affected the practices and style of late medieval religious life.



Moreover, the fear of plague and of unforeseen death intensified the religious consciousness of the population and disseminated it across larger sectors of society. But it also favored the development of a kind of medicinal, even magical religion, the chief feature of which was the cult of protector and healer saints. To many, particularly among the educated, the cult of saints, their relics and shrines, had seemed superstitious or idolatrous. The saints were usurping the veneration due to God alone. The plague and the style of piety it promoted set the stage for a protracted and divisive debate over the nature of pure religion. The sounds of religious dispute echo down the centuries of the late Middle Ages and the early modern epoch. And the debate helped provoke eventual schism in the Christian community. Europe proved to be a strong patient, and emerged from its long bout with pestilence healthier, more energetic, and more creative than before.[36] But its civilization has not outlived all the *sequelae* of the great epidemics.

Notes