The Sacred Nature of Secular Medicine in the Time of the Black Death

By

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With respect to the ancients the moderns are like a dwarf on the shoulders of a giant, who sees everything that the giant sees and things beyond as well.

—Henri de Mondeville, *Chirurgia Magna*
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Chapter I
An Introduction

In perhaps every discussion of late Medieval Europe, there is some mention of the Black Death. It was called by many other names in its day, and death tolls, still uncertain, often range between one-half and two-thirds of Europe’s population.¹ Nonetheless, what is indisputable is that beginning around 1347, it punctuated the mid-fourteenth century with devastation, fear, and unpleasant mystery. Chroniclers like the often-quoted Giovanni Villani died shortly after telling readers that the “pestilence lasted until _______,” and Irish monk John Clynn waited among the dead and began writing “in case anyone should still be alive in the future.”² It is fair to say that it was one of the darkest periods in European history, and in the European mind.

Religious fervor exploded with the belief that the sickness had been the result of divine punishment. Ecclesiastical authorities granted remission of sins, composed masses, organized processions, consecrated cemeteries, and permitted confession to a layman—even to a woman—until the ordained priests already in short supply became available, while the faithful confessed and feverishly cried out to Mary, Saint Sebastian, and God for mercy.³ As they paraded across central Europe and mercilessly beat themselves in an attempt imitate Christ and attain God’s forgiveness, the flagellants, like others, nonetheless sought scapegoats. Even as Pope Clement VI condemned Jewish pogroms carried out by the flagellants and others, he still advocated the popular belief that the disease was the work of an angry God. On October 1, 1348, in a reissued

mandate accompanying the bull *Sicut Judeis*, the pope spoke in the aftermath of the pogroms in regions of Germany and France, commanding all prelates to condemn the unfounded claims that the Jews had conspired in creating the epidemic through well poisonings, and proclaiming the pestilence as the work of God, and punishment for the sins of man.4

Perhaps it would have been difficult for the pope to argue for a better explanation in the face of such unprecedented horrors, as well as the desire for some source of mercy, which the angry but benevolent God would appear to be. This method was naturally religious, but also reasonable in light of circumstances. Moreover, belief in a divine cause of the epidemic was the popular explanation for much, if not most, of Western Europe, from commoners to chroniclers and from prelates to the heretical flagellants. Many returned humbly to the Church and in some manner sought an appeal to the mercy of God, though others simply lost hope, if not their lives, in the process. However, such broad descriptions of the religious, or even singularly religious, responses from the pope or the people must not oversimplify the depth and diversity of thought within these unstable years of the Plague. If anything, historical records of the first outbreak truly reveal just how complicated understandings of the Black Death actually were.

In discussing reactions to the first outbreak between about 1347 and 1352, we shall see that medical professionals of the time were distinctive characters. This thesis will examine how doctors might have understood the principles and intentions of their trade amidst the theological quandaries that the Black Death brought. Even as the pope himself proclaimed the divine cause of the pestilence, physicians and physician-surgeons responded to the epidemic with established methods of prevention, prognosis, and treatment, with progressive understandings of the disease and less explicit mentions of God or divine cause. As explanations of divine wrath and calls to popular piety constituted the responses of the pope and other religious authorities, physicians

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4 Horrox, 221.
found answers in planetary motion, meteorology, earthquakes, and theories of corruptive air and contagion, while they employed measures to facilitate bodily resistance to the disease, cleanse the environment, and even manually purge the body of its poisons.

This thesis is not a discussion of contrasts and contradictions, however, but an attempt to reconstruct the intellectual traditions that would reconcile these seemingly separate responses to the Black Death. Late medieval medicine stressed an inherent connection between human roles and divine intentions, and for all of its human merits, even popes recognized some purpose for medicine in Christian society. Physicians themselves, for all of their diverse personal motives and educational backgrounds, agreed upon the theoretical foundations of medicine, as well as a belief in the deeper spiritual significance of natural healing. By the arrival of the Black Death, they had depended upon the Christianized paradigm of natural philosophy and observed deeper spiritual implications in the application of their ideas. Some demonstrated a belief that they were serving both as the interpreters of God’s natural environment and the regulators of His creation, and all for the greater spiritual ends of His glorification and the good works of the healed patient. Furthermore, the extra-Christian medical and philosophical traditions that had become the basis of late medieval intellectualism were articulated in Christian minds beside the belief in Christ the divine healer and an omniscient, omnipotent, and benevolent God. Late medieval writings of theologians and physicians alike demonstrate how scholastic perceptions of health and responses to illness held an unmistakable spiritual meaning. As a doctor observed and employed the logic of nature, he was dutifully acknowledging the role and provisions of God.

This thesis argues that medicine in the time of the Black Death, which we will classify as scholastic medicine, was founded upon a highly rationalized framework of nature and health, but simultaneously recognized divine agency in the logical cause and cure of human illness. The
second chapter argues that medicine by the time of the Black Death was firmly grounded in the foundations of Aristotelian logic and Christianized natural philosophy in a manner that placed nearly all of God’s creation within a vast, analytical framework. The third chapter argues that doctors acknowledged God as the cause of the Black Death as they traced the disease through a wide variety of natural causes and causal chains to His initial will. The fourth chapter argues that physicians, particularly in the case of the Black Death, considered healing to be the rational application of divinely established natural principles, and ultimately recognized the intervention of God as the actual remedy. In general, this thesis aims to explore the spiritual qualities of medicine in a time when all academic disciplines were heavily founded upon the reconciliation of Christianity with logic and natural science, and how medicine as a practical field adapted its Christianized, logical paradigm to the complexities of the Black Death.

*Modern Understandings of the Black Death*

As with any historical pandemic that we can only diagnose retrospectively, our modern understanding of the Black Death remains limited by the forces of time, and in pinpointing the disease in time, we are largely at the mercy of historiographers. Recent scholarship consistently considers the Black Death the beginning of the Second Pandemic, which persisted until about the nineteenth century. The First Pandemic began with the Plague of Justinian circa 540 and ended circa 750, and the Third Pandemic, the most recent, began in China in the 1890s. We should not associate these three pandemics based on some assumed uniformity of their diseases, especially as the plague of medieval and early modern Europe remains disputed as to what it actually was. That which we call the Black Death or first outbreak lasted from about 1347 until 1350 in most of Western Europe, spreading northeast and northwest from Sicily. The distinction of the first
outbreak of the Second Pandemic derives from its unprecedented spread and deadliness, which historians still recognize, particularly according to the medical descriptions that could no longer adopt historical parallels even to the Plague of Justinian. Recent scholarship has concluded that there were multiple variations on the same disease that we simply call the Black Death or Plague, which were its bubonic, pneumonic, miasmatic, and septicemic forms. To some degree, we may attribute the perceived diversity of the disease to the diversity of reactions to it and accounts of its course, symptoms, and cures, as well as doctors’ attempts to classify them.

For the purposes of our discussion, we will consider the unprecedented character of the Black Death and its understanding within medical and social conventions. Medical professionals of the fourteenth century approached the arrival of the disease most often with an acknowledged lack of experience and preparation. They depended upon natural philosophy (science in its day, as we shall see) to rationalize the new disease and recognized the Plague’s relationship to other diseases and their symptoms. Much of our modern understanding develops from medical and non-medical descriptions of corruption, contagion, and the infamous buboes (inflamed lymph nodes), and fourteenth-century physicians’ attempts to understand them within a paradigm of health and illness. This thesis approaches the Black Death, or first outbreak of the plague, not as a diagnosable disease, but as a critical moment in the history of medicine, and examines how the disease related to larger theological understandings of medicine, health, and illness.

Sources

A vast majority of the primary sources consulted in this discussion are medical, relating to either the academics or practice of medicine. Principal among the non-medical sources is the Summa Theologica of Thomas Aquinas, the thirteenth-century compendium of Christian ritual
and theology as reconciled with Aristotelian philosophy. It serves to demonstrate the emphasis on philosophical rationality on all aspects of late scholastic thought and particularly how the role of a physician could be reconciled with Christian ideas of God and nature. Other non-medical sources include canon law records relating to concerns over medical practice and the *Invectives* of Francesco Petrarch on the subject of papal physicians and the pope’s health. These accounts will provide a deeper insight into the non-medical components of medicine and the controversies that medicine encountered and avoided before the time of the Black Death.

Most prominent among these medical sources are what historians commonly refer to as “plague tractates,” from the time of the first outbreak circa 1347. The term tractate is often used loosely to refer to essays and accounts on the explanations, predispositional factors, preventative measures, and treatments and remedies for the pestilence of many names. At least twenty-five plague tractates were composed in and before 1350. These accounts, their authors, and their intentions were diverse. They originated from southern France, Italy, Spain, and Germany, and their physicians exhibited differing degrees of educational background and varied approaches to describing the causes and treatments, and diverse intentions for even writing on the subject. The unifying quality of the authors of these tractates was their academic background regarding the theoretical principles of nature and the body, which they gained either through formal university education or because of guild and licensing requirements of the same knowledge.

In regard to our medical sources, we will recognize that the Black Death, as a period in the history of medicine, did give way to a greater emphasis upon practical observation and cures, but did not demolish the scholastic medical foundations. Plague tractates from about 1348 to

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6 Historians have asserted that the Black Death prompted a major shift away from strict scholastic traditions, see Samuel K. Cohn, Jr., “The Black Death: End of a Paradigm,” *The American Historical Review* 107, No. 3 (June
1350, the first outbreak, despite the regional and educational differences that might account for their different emphases on theoretical or practical knowledge, were still written within these theoretical conventions. Even those physicians who reached new conclusions on the epidemic, if not all epidemics, because of the unprecedented disease at least attempted to adapt them to this framework. Furthermore, later accounts by John of Burgundy and Guy de Chauliac verify that such rationalized advancements did exist within the framework of rational observation of logical causes and effects, as both authors exhibited greater confidence on the subject of the plague, but did not reject scholastic means of explaining it. It is this common adherence to the perceptions and approaches to illness, and particularly to the Black Death, that binds these plague physicians together in the understanding of what medical observation of and treatment against the Black Death signified directly or indirectly in their spiritual consciousness.

Jacme d’Agramunt’s *Regiment de preservació a epidemia o pestilencia o mortaldats* (*Regimen of Protection Against Epidemics or Pestilence and Mortality*), completed on April 24, 1348, most likely in northeastern Spain, is the earliest dated plague tractate. Agramunt was a physician and professor of medicine at the University of Lérida who may have received his title of doctor in 1342, completed this treatise during the final year of his lectureship, and died from the Plague shortly afterwards. This tractate was written as a letter (*Epistola de Maestre Jacme d’Agramont als honrats e descrets seynors pahers e conseyll de la Ciutat de Leyda*) addressed to, and commissioned by, the lords and councilors of Lérida. It was intended for the general public, composed in Catalan (not academic Latin, likely for its intended audience), and offered

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2002), http://www.historycooperative.org/journals/ahr/107.3/ah0302000703.html (accessed August 31, 2011). I am asserting a distinction between the increased empiricism observable in plague treatments after the first outbreak and an immediate departure from the philosophical foundations of scholastic medicine, as evident in plague tracts from the second and third outbreaks and observed in Christine Nockels Fabbri, “Continuity and Change in Late Medieval Plague Medicine: A Survey of 152 Plague Tracts from 1348 to 1599” (Ph.D. diss., Yale University, 2006), 23-24.

7 Aberth, 51; Palazzotto, 31.

preventative advice only.\(^9\) This is likely due to the fact that he composed the source without having yet witnessed the epidemic, and relied on his knowledge of other epidemics.

Gentile da Foligno composed as many as six works on the Black Death, though the authorship of several remains disputed.\(^10\) These are the *Consilium primum magistri gentilis de pestilentia* (*Master Gentile’s First Consilium Concerning the Pestilence*), composed for the Guild of Physicians at Genoa sometime in 1348; the *Manifestum videtur, quod causa terribilis mortis... sit venenosa putredo circa partes cordis et polmonis* (*It Seems Clear That the Cause of the Terrible Death is the Venomous Putrefaction Around the Parts of the Heart and Lungs*); *Tractatus de pestilentia et causis eius et remediis* (*Treatise Concerning the Pestilence and its Causes and Remedies*), likely written in 1348; the *Consilium magistri gentilis super pestilentiam* (*Master Gentile’s Counsel Concerning the Pestilence*), likely written in 1348; the *Consilium contra pestilentiam* (*Counsel Against the Pestilence*), written in early 1348; and the *Consilium contra pestem* (*Counsel Against the Pestilence*), addressed to the college of physicians of Perugia composed sometime before June 18, 1348, when the author (due to exhaustion or Plague) died. Outside of these writings, Foligno was both a renowned physician, in line with the more liberal trends of Italian medical education that deemphasized the theoretical aspects of diagnosis and prognosis, as we will later see, in favor of more immediate observation and practical treatments. He was also an accomplished writer in general, and his best known works included his complete commentary on Avicenna’s five-volume *Canon of Medicine* and an extensive corpus of consilia (counsels) dealing with the diagnosis and treatment of specific illnesses and injuries such as *Consilium ad morsum serpentinis* (*Counsel Regarding a Snake Bite*).

\(^9\) Aberth, 51.
\(^10\) Byrne, *The Black Death*, 142.
Giovanni della Penna’s *Consilium magistri Johannis della Penna in magna pestilentia* (Counsel of Master Giovanni della Penna Regarding the Great Pestilence) was composed in Naples in 1348. The author was a lecturer at the faculty of Naples. A key characteristic of his tractate is his disagreement with Gentile da Foligno’s theory of the pestilence as a “poisonous putrefaction [around] the heart and lung,” which demonstrates the diversity of opinion despite the governing principles of the academic side of medicine.\(^{11}\)

Peter Damouzy’s *Tractatus de epydemia editus a magistro Petrus de Amousis* (Treatise on the Epidemic Published by Master Peter Damouzy) was composed in Reims on August 16, 1348. His is the first tractate to deal with the Plague in France. Compared particularly to those of Jacme d’Agramunt and Gentile da Foligno, it shows a greater reliance on textual authority than on direct clinical experience or analogical speculation.\(^{12}\) The author identified astrological cause as an explanation for the disease’s universal nature, but despite his training in astrological studies at the University of Paris, he did not insist upon this explanation or use it as a basis for etiological, the cause of further causes, as many later authors would.\(^{13}\)

The Medical Faculty of the University of Paris’ *Compendium de epidemia per collegium facultatis medicorum parisius ordinatum* (Compendium on the Epidemic Composed by the Medical Faculty of the University of Paris) was written in Paris in October 1348, as the Plague was approaching the city, under the command of King Philip VI.\(^ {14}\) The compendium is divided into two sections: three chapters on the cause of the epidemic and seven chapters on preventative and curative measures.\(^ {15}\) It was the school’s first major scholarly work, and it became available

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\(^{12}\) Palazzotto, 39.

\(^{13}\) Ibid., 67.

\(^{14}\) Byrne, *The Black Death*, 37, 158.

\(^{15}\) Horrox, 158.
in French, Italian, and German translations within fifty years of its publication, and its popularity lasted into the following century.\textsuperscript{16} In addition to having no direct, clinical observation of the disease, and the masters of the medical school wrote the treatise for other physicians, and these factors account for its being among the most technical, philosophical, and speculative treatises. It was also the earliest to heavily explain the role of distant, astrological causes, particularly the 1345 conjunction of Jupiter, Mars, and Saturn in Aquarius that caused a deadly corruption of the air, which they cited on textual authority of Albertus Magnus (misattributed as “Aristotle”).\textsuperscript{17} Its academic authority and popularity among other physicians and Plague tract writers very likely contributed to the greater frequency of emphases on astrological causes and on the astrological (etiological) basis for other immediate causes, as observable after its publication.

Master Albert’s \textit{Consilium magister Alberti ad pestilentiam in 1348} (\textit{Consilium about the Pestilence in 1348 by Master Albert}) was composed in 1348, possibly in Italy.\textsuperscript{18} The tract tells us nothing about the author besides its author and year he composed it. Its emphasis on practical measures and the contagious nature of the disease implies direct observation.

Alfonso de Córdoba’s \textit{Epistola et regimen Alphontii Cordubensis de pestilentia} (\textit{Letter and Regimen of Alfonso de Córdoba Regarding the Pestilence}) was composed in Montpellier in either 1348 or early 1349. The author claimed to be a “master of liberal and medical arts” and might have written in response to the Paris compendium, as he not only described a different astrological, but further emphasized a man-made (artificial) cause.\textsuperscript{19} In the process of discussing multiples causes, Córdoba also discusses multiple, non-simultaneous pestilences.

\textsuperscript{16} Palazzotto, 40.
\textsuperscript{17} Horrox, 159.
\textsuperscript{18} Palazzotto, 41.
\textsuperscript{19} Aberth, 45-46.
Abū Ja’far Ahmad ibn ’Ali ibn Muḥammad ibn ’Ali ibn Khātimah’s *Tahṣīl al-gharād al-qāsid fī tafṣīl al-marād al-wāfīd (A Description and Remedy for Escaping the Plague in the Future)* was composed in February 1349, apparently in response to a friend who asked for the author’s opinion on the disease’s cause and treatment, and is the most detailed of the Andalusian Muslim tractates. Unlike many of those from Christian Europe, this tract is constructed as a dialogue with a silent detractor. In many respects, however, the tractate differs little from those of Christian origin by relying upon textual authority and dealing with the subjects of etiology, susceptibility, symptomology, physiology, preventative regimen, and preventative and curative recipes. Ibn Khātimah was a physician and poet from Almería (part of Muslim Granada at the time) who lived until at least 1369, when fellow physician, Ibn al-Khāṭib supposedly mentioned him in writing. Despite his reliance upon earlier theory in explaining causes, he also implies some experience in diagnosing and treating patients in Almería. Ibn Khātimah’s tractate and others of (Andalusian) Muslim origin are discussed for the purposes of understanding larger Abrahamic—but still scholastic in approach—views of the causes of the Black Death and the rationale and precautions of its preventions and cures.

*Tractatus de epidemia (Treatise Regarding the Epidemic)* by an anonymous practitioner of Montpellier (“Quidam practicus de Montepessulano”) is dated May 19, 1349 in Montpellier.

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20 Palazzotto, 42.
21 Byrne, *The Black Death*, 155; Palazzotto, 43.
22 Aberth, 55-56.
23 There are at least two other known Andalusian Muslim tractates composed between 1348 and 1350, but I have not found any translation of their contents: the treatise of Muhammad ibn ’Ali ibn Abdalla Alakhamita (or Alshakuri, or Alschechuri), a physician born in Segura in 1326 who died from the plague in 1348 and whose treatise comments on the etiology of the plague, defends the discipline of medicine; and the presumably later treatise, *Istah al-niyyah or Recto intentio (The Correct Intention)*, by Muhammad ibn Muḥammad ibn Giaphareus Aba Abdalla (Abelbanus) of Almería, a physician, poet, grammarians, and official at Almería and Marchena who died in 1363. Both are listed and briefly described by Palazzotto, 43-44. The first is also more recently listed and described by Justin K. Stearns, *Infectious Ideas: Contagion in Premodern Islamic and Christian Thought in the Western Mediterranean* (Baltimore: Johns Hopkins University Press, 2011), 80-81.
and addressed to the University of Paris.\textsuperscript{24} The scholastic qualities of this tractate are its content and reliance upon textual authority. This may be related to the implication that the author was “some practitioner” and not a member of a teaching body at the university of the city in which he wrote. With scholastic reasoning, the author stressed his explanations of more immediate causes in addition to the 1345 conjunction in Aquarius as described by the Paris faculty. He considered the dominance of Saturn to be cause of the under-ripening of plants, which threatened humoral balance.\textsuperscript{25} He also gave a unique causal explanation, transmission of the disease between people through eyesight, but founded it upon Euclid’s theories on refraction and reflection.

The anonymous \textit{Quaeritur primo quae sint aegritudines nunc currentes} (First It Is Asked What Are the Diseases Now Current) was likely composed in Germany in the spring of 1349, when the Plague arrived in this region, though nothing certain is known of the author or place of its composition. The treatise is founded upon textual authorities like Hippocrates and Galen and divided into sections regarding causes, dangers to the body, and preventative measures.\textsuperscript{26} The tract also stresses the role of meteorology on the arrival of the disease, specifically citing humid winter and southern winds, according to Galenic and epidemic theory.

The tractate \textit{Ad praeservandum ab epydemia} (On Being Preserved from the Epidemic) by John Hake (or Johannes Griese, or Johannes von Gottingen) was likely written when the author was at Avignon, when the epidemic struck there. The author was a renowned German physician, bishop, and astrologer who studied medicine at the University of Montpellier in 1314 and served as a professor of medicine and the arts there by 1319, served as a personal physician to Ludwig of Bavaria between 1314 and 1318, and served as a physician to Cardinal Gaetani at Avignon in 1318. He served as bishop of Worden on the Ruhr from about 1331 and of Freising in 1340, but

\textsuperscript{24} Palazzotto, 44.
\textsuperscript{25} Horrox, 183.
\textsuperscript{26} Palazzotto, 45.
remained at Avignon throughout these years until his death in October 1349. In an approach less scholastic than others’, the author did not mention astrological etiology, despite having been an astrologer, but stressed practical recipes for prophylactic and therapeutic remedies.\(^{27}\)

The tractate *Der Schatz der Wijssheit und der Kunst* (*Treasure of Wisdom and Art*) was compiled by five local physicians for the protection of Strasburg. They were Albertus, a native of Parma and canon of St. Thomas, Rodulfus (Senger or Swenninger), Henricus von Saiszen (of Saxony) from Brenberg, Bernart von Rostock, and Henricus von Lübeck. While the tract does not stress causes, but prevention and treatment, its advice conforms to Galenic tradition.\(^{28}\)

*Utrum mortalitas, que fuit hijs annis, fit ab ultione divina propter iniquitates hominum vel a cursu quodam naturali* (*Whether the Mortality That Has Occurred in These Years Is Because of Divine Wrath for the Iniquities of Man, or Because of Some Natural Cause*) was likely written in Germany some time after 1349 and discusses the onset and spread of plague from an earthquake throughout the German provinces.\(^{29}\) The text is scholastic in its division into four sections and the fact that it deals heavily with natural theories. While the tractate suggests that the author did not directly observe the disease, in it the author did discuss the importance of observation in framing his theory on the epidemic.

The tract *That Which Satisfies the Questioner regarding the Appalling Illness* by Abū ’Abdallah Muhammad ibn ’Abdallah ibn Sa ’īd ibn al-Khatīb Lisânal-dīn (Ibn al-Khatīb) might have been composed in response to Ibn Khātimah’s earlier treatise. The author was educated in Granada, where became vizier in 1349, but was arrested in 1359, persecuted for heresy in 1371, and murdered in prison in Fez in 1374. As we shall later discus, his beliefs and emphasis on the contagious nature of the Plague and the need to flee it were controversial to regional traditions of

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\(^{27}\) Palazzotto, 46.

\(^{28}\) Ibid., 47.

\(^{29}\) Ibid., 48.
Andalusian Islam. Nonetheless, they are characteristic of the tract, and his beliefs on contagion may have further created political and religious enemies. Ibn al-Khatīb was also the author of works on history, biographies, mystic philosophy, and other works on medicine.

The anonymous Causa epidemiae et praeservatio eiusdem (The Cause of the Epidemic and Also its Perpetuation) was written in 1349 or 1350. It discusses the 1345 conjunction found in the Paris treatise, as well as other causes, with attention to preventative measures.

Simon de Covino’s Magistri Symonis de Covino, De judicio solis in convivis saturni (Concerning the Judgment of the Sun at the Feasts of Saturn, by Master Simon de Covino) was composed in Paris in 1350. The author received his medical degree from the University of Paris, practiced both medicine and astrology at Montpellier, and died in Liége on April 30, 1367. The tractate is an allegorical poem of 1132 hexameters, in four parts, explaining the allegorical cause of the planetary conjunctions of 1345 (found in the Paris compendium), in terms of the classical deities, as well as description and treatment of the Plague. While it is speculative and relies upon textual authorities, it also provides descriptions of symptoms. The prologue is written in prose and summarizes the allegorical astrological cause.

The anonymous Wyder dy epidemie oder wider dy buse luft dez pestilencie heyssit und behudet den lijf des menschen vor vineyne eyter, vor bossen bulen, drusen, unde apostemen (Against the Epidemic or Against the Bad Air of the Pestilence and Preserving the Life of Men before the Poisonous Matter, Bad Boils, Glands, and Imposthumes) was composed in German, likely in 1350. There is a brief paragraph based on Galen and Avicenna, discussing dispositional

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30 Stearns, 80-81.
31 Palazzotto, 48-49.
32 Ibid., 50.
33 Horrox, 163; Palazzotto, 50.
factors. The text begins and concludes with descriptions of recipes, remedies, and preventatives, many of them aimed at treating bubonic abscesses.34

Dionisius Secundus Colle’s *De pestilentia 1348-1350 et peripneumonia pestilentiali, et maligna simul* (Concerning the Pestilence of 1348 to 1350, and Pestilential and Simultaneously Malignant Peripneumonia) was written sometime in or after 1350, after the author had recovered from the subsided Plague. Dionisius Colle was a member of a medical faculty at Belluno who apparently composed the treatise to describe the numerous recipes employed by himself, his colleagues, and others. The treatise is divided into seven chapters: one analytical account of symptoms, and six chapters on medical prescriptions.35

Together with these tracts, we shall occasionally examine earlier and later medical works, in order to shed light on the traditions and demonstrate the lasting validity or efficacy of their claims. Among these sources will be the post-plague *Inventarium sive chirurgia magna* or simply *Chirurgia magna* (Great Surgery) of Guy de Chualiac completed in 1363 by the surgeon-physician to three consecutive Avignon popes, including Clement VI. As a physician-surgeon, the author stood among those his time who were gradually reconciling the most external, hands-on medical trade with the foundations of natural philosophy and scholastic physiology, which added greater depth to his natural and systematic explanations of maladies and their treatments. Moreover, this “guidebook to surgery,” which widely served as an authoritative source for centuries to follow, was composed with the intention of collecting and organizing existing ideas.

For the purposes of this thesis, the source most prominently serves to demonstrate persisting thoughts regarding the theoretical principles, practical ethics, and limits of scholastic medicine as described fifteen years after the first outbreak. Furthermore, the author was both an active

34 Ibid., 51.
35 Ibid., 51-52.
physician and a survivor of the first outbreak, and provided a section devoted to the illness. In
addition to the popular renown as a physician and surgeon, Guy de Chauliac wrote on a variety
of specific medical subjects, including hernias and cataracts, before this, his magnum opus, and
his death in the time of the third outbreak circa 1368.

In addition, this thesis draws upon a variety of secondary sources, mostly relating to the
development of scholastic medicine and the contents of the plague tractates of the first outbreak.
Those regarding the content of the plague tractates include “The Black Death and Medicine: A
Report and Analysis of the Tractates Written Between 1348 and 1350” by Dominick Palazzotto,
and “Facing the Black Death: Perceptions and Reactions of University Medical Practitioners” by
Jon Arrizabalaga, which discuss the diversities of medical observation and approach, but without
the level of theological insight that this thesis will emphasize through a similar process. Another
recent survey of plague tractates, “Continuity and Change in Late Medieval Plague Medicine: A
Survey of 152 Plague Tracts from 1348 to 1599” by Christine Fabbri, in addition to examining
152 tractates from and in the two centuries after the first outbreak, statistically compares 80 of
them based on their varying citations of divine punishment as the cause of the plague. Fabbri’s
graphs demonstrate that tractates from 1599 more abundantly cite divine punishment than those
of earlier outbreaks, and while I agree with the author that this may relate to some shift in the
perceived relationship between God and natural causes, I disagree that the so-called “secondary
role” to which physicians of the first outbreak ascribed God in relation to natural causes was as
distant or disconnected from natural causes as she appears to describe it.36 Sources regarding the
development of scholastic medicine and its intellectual foundations include Medieval Medicine:
A Reader by Faith Wallis, Medicine Before Science: the Business of Medicine from the Middle
Ages to the Enlightenment by Roger French, and God’s Philosophers: How the Medieval World

Laid the Foundations of Modern Science by James Hannam, and describe the general trends of scholastic thought prior to and during the period of medicine that we will discuss.

With my examination of these sources, I intend to contextualize medical understandings of the Black Death with the theological consciousness of their medical writers. While historians have already analyzed a number of these medical texts, they have primarily done so with regard to their secular merits of attempting to explain and treat the disease, and within the contexts of medicine and general responses to the first outbreak. Others have broadly discussed the religious perspectives of the time, among clergy, commoners, and heretics, but have often seemed to keep them separate from medical reactions. During my own research, I eventually came to recognize these spiritual and medical perspectives as companions, realizing that doctors who observed and healed through material means were also mindful of God’s active presence in the natural world. I then further found that Christian cosmological views did not simply coexist with the profession of medicine, but that they were actually foundational to medicine’s everyday theory and practice. Thus, I intend to somewhat redirect the discussion by reconciling the secular words and works of scholastic physicians with that which might have constituted their consciousness of God’s own actions and intentions. Therefore, this thesis will demonstrate the manner in which these medical authors in the time of the Black Death recognized the role of the divine in the theory and practice of natural healing, and accordingly within the causes and cures of the disease.

Course of Discussion

The second chapter argues that the logical theories and practices of scholastic medicine at the time of the Black Death were grounded in the Christianized principles of natural philosophy, and that a theological consciousness pervaded the doctor’s learned observation of and interaction
with God’s natural causes, as well as his approach to the act of healing. First, we will define and
discuss the foundations of scholastic medicine leading up to the mid-fourteenth century, as an
academic discipline that stressed the philosophical frameworks of rational argumentation and
nature in all observations and explanations. We will also emphasize how logic in general was
infused with the Christian significance that God’s intention was present in every natural event
and substance, and how Christianized Galenic theory defined the body as an inherently balanced
microcosm, as rational as the macrocosm. Next, we will incorporate the statements of scholastic
physicians on the inherent purposes and expectations of the medical art, as well as speculate on
their views of God’s role in the actual healing process and the implication that God acted through
natural healing and ultimately provided its cure. Next, we shall explore the theological views of
both human agency and medical action in conjunction in order to formulate an understanding of
how medicine not only viewed, but was viewed within, a spiritual dimension to bodily health.
Finally, we shall explore the intellectual and practical boundaries that made scholastic medicine
acceptable and applicable to Christian theology and society, as a means by which the physician
followed God’s logic in natural causes and facilitated His eventual cure through the application
of natural methods and for higher spiritual ends. We will conclude that scholastic medicine was
a natural science that was constantly mindful of the divine, and that it would establish the basis
for the thoughts and actions of physicians who faced the Black Death.

The third chapter will argue that the scholastic medical emphasis on God’s role in all
natural causes led physicians to understand the inherent role of God as the ultimate cause of the
Black Death. We will first explore the natural philosophical framework in Aristotle, reconciled
with Christian cosmology, traced every natural occurrence back to God. We will then examine
the general and complex perceptions of natural causes and causal chains in the explanations of
the Plague as found in the previously listed tractates. From here, we will explore the numerous explanations of astrological occurrences, earthquakes, weather patterns, contagion, infection, and poison, and how all of these were traced along a causal chain of nature back to the ultimate cause of all things: God. We will conclude that the natural explanations of plague physicians critically employed an emphasis on the belief that God, through the inherent logic of all of his natural causes, prompted and permitted all things and had ultimately caused the epidemic.

Finally, the fourth chapter will argue that these principles of God’s presence in nature and the logic of nature were not simply limited to the causes of illness, but also those of health, and that physicians acknowledged the role of God in the methods and efficacy of secular healing, if not for a higher purpose. First we will examine how the authors of the plague tractates explicitly discussed, according to God’s will, the purpose, necessity, and efficacy of medicine against the Black Death. Next we will apply this to our discussions of preventative and curative measures, and emphasize the natural logic of health, as well as the higher, spiritual indications of natural consequences, evident in these measures. In general, we will emphasize the belief that healing and its efficacy were controlled by God’s logic and will, that medical advice was of a charitable character and necessary to the preservation of a good, Christian life, and that the indications of God’s will in the positive effects of healing and prevention might have held a higher spiritual message in one’s proper behaviors and awareness of God’s presence. We will conclude that the variety of preventative and curative measures conformed to a foundational belief in God’s role in natural causes and effects, and that the advice of prevention and application of healing were not only logical but divinely willed, even in the case of the Black Death.

As a whole, this thesis argues that scholastic medicine existed within the intellectual and practical limits of academic, professional, and ecclesiastical traditions, as physicians adapted its
rational framework to their explanation of and response to the plague in a manner that inherently acknowledged God’s presence in both the causes of the illness and the rationale and efficacy of the cure. Even as approaches by plague physicians will be diverse in the latter two chapters, we will see how the unifying observational and practical concepts of rational medicine were evident across Western Europe. Furthermore, we will stress that this connection between medical proto-science and divine expectations was an inherent characteristic of the scholastic period, and that physicians recognized the divine within the most mechanical aspects of nature.
Chapter II
The Development of Scholastic Medicine

For a concise description of medicine at the time of the Black Death, we may look to its critics whose observations outlined its practitioners’ beliefs and practices. One of these critics was the fourteenth-century poet Francesco Petrarch, whose *Invectives* addressed the physicians of Pope Clement VI as incompetent purveyors of complicated ideas, blasphemous quacks, and parasites of papal patronage. This infuriated prose was retaliation against the papal physicians who had attacked his own words in letters to the pope warning against the perceived dangers of groups of doctors whose honesty was questionable and whose inclination to error was increased with their numbers.¹ Nonetheless, even as he was criticizing a select group of doctors for their misunderstanding of their own intellectual tradition and poor consideration for the ethics in the practice of healing, Petrarch recognized the basis of a physician’s approach to defining illness and its cure through a complex knowledge and application of natural philosophy.

In this chapter, we will observe, as Petrarch recognized, that physicians in the time of the Black Death practiced a trade based upon a well-defined body of knowledge and practice, but we will also see that, contrary to Petrarch’s criticism, a theological consciousness was critical to the study and practice of medicine. As he constructed his literary opposition, Petrarch outlined the components of natural philosophy and the skills and ethics of medical practice, which were the governing precepts of scholastic medicine. From an observation of the logical and theological consciousness of medicine leading up to the time of the first outbreak, we will comprehend the basis of physicians’ approaches to the Black Death. We will see that intellectual developments in late Medieval Europe established medicine, like other disciplines, as a highly academic pursuit.

based on Christianized Aristotelian philosophies of nature and logic, and that ecclesiastical and intellectual authorities ensured that the knowledge and practices of bodily health remained both subservient and complementary to greater spiritual concerns.

This chapter will examine the institution of scholastic medicine prior to 1348 in a manner that conveys the union of the rationality of nature with Christianity in its knowledge and practice. First, we will explore the philosophical foundations of the university education in the late Middle Ages, in order to define scholasticism, its unifying relevance in all forms of higher learning, and its Christianization. We will see that scholastic thinkers considered logic to be the governor of God’s natural world, and see that the physician’s understanding of the properties and functions of nature was integral to the practice of healing. Next, we will deal specifically with scholastic medical thought and discuss the foundational theories of health and illness of Galen, which stood upon the natural and logical philosophical framework established by Aristotle. As we identify the principles and Christian character of scholastic medicine, we will explore the proper place of bodily health according to ecclesiastical thought and the relegation of the role of physicians to one of subordination to the Church, the physicians to the soul. This chapter will conclude that the theoretical and practical foundations of scholastic medicine by the time of the Black Death were defined by a belief that God worked through the logical principles of nature, and will set the stage for our analysis of the Black Death, which doctors believed had resulted from divine agency, and could and should also be prevented and cured according to divine will.

The Philosophical Foundations

The intellectual method between the twelfth and sixteenth centuries, scholasticism, was founded upon the ideas and methods of Greco-Roman philosophy, and these components were at
the heart of every academic pursuit, including the learned discipline of medicine. The foremost characteristic of scholasticism was its emphasis on sophisticated reasoning through Aristotelian logic, and the basis of scholastic medicine was unmistakably the same. This approach was the product of Christian Europe’s recovery of Aristotelian philosophical texts and placed immense importance in classification, argument, and deduction.² From observation, a scholar would use the citations of textual authorities like Aristotle together with his own skills of analysis to reach a logical conclusion. While this may be an oversimplification of an entire intellectual approach, it serves to characterize the general approach of scholastic learning, for which academics endured even the criticism of contemporaries for their emphasis on meticulous syllogisms and lesser concern for practical conclusions (which became particularly prominent in scholastic medicine, as we shall later observe). This method of applied thought that derived from Greco-Roman tradition became a vast and complicated means for perceiving every inch of creation in rational terms, and prominently characterized scholasticism and scholastic medicine.

As a result, Aristotle’s natural philosophy became the framework for understanding and describing natural phenomena, according to the sophisticated means of scholastic analysis. This philosophy was a means of explaining the natural world through rational explanations and causal connections, and, as the basis of academia, it played major roles in all scholastic disciplines and their applications of methods of distinction and logic to theology, as well as to natural sciences. However, its influence, both logical and natural, upon medicine was profound, as it established such a logical framework for understanding the human body, and set the rational foundation on which scholastic, or “rational,” medicine would stand for centuries.

The Christianization of the natural sciences in scholastic thought affirmatively came with the conjunction of Aristotle’s nature with and subordination to Catholicism. According to the ecclesiastical authorities that had observed both the usefulness and dangers of Aristotle, natural philosophy was to serve as the “handmaiden” to theology in medieval intellectualism, and all pagan philosophy had to remain within the boundaries of Christianity, not apart from it, and, furthermore, benefit Christianity.³ The twelfth-century scholar Averroës had been exiled from Muslim Spain for his radical ideas, not the least of which was his emphasis on Aristotle’s idea that natural laws even controlled God’s freedom. Such ideas implied that philosophy was not only separate from religious teaching, but that it could surpass it. This was a real danger in the university atmosphere, when Paris professor of theology and philosophy Amalric (Amaury de Bène) had used reason and logic to undermine Christianity, prompting the heretical movement that took his name (the Amalricians) and the University of Paris to decree in 1210 that “[n]either the works of Aristotle on natural philosophy nor their commentaries [were] to be read at Paris in public or private […] under penalty of excommunication.”⁴ With a later set of condemnations in 1277, the bishop of Paris more precisely concluded that the study of natural philosophy could not interfere with theology or limit God’s freedom according to natural possibilities.⁵ A central part of the Christianization of natural logic came with the requirements that it both coexisted with and conformed to Christian truth. The scholastic interpretation of nature as a framework of rational causes and principles was necessarily married and subordinate to Christian theology.

With its subservient coexistence with Christian truth, natural philosophy in the scholastic served as the method of natural explanation within an undisputedly Christian worldview. In his

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⁴ From the 1210 decree formally excommunicating Amalric, as quoted by Ibid., 95-96, 79.
⁵ Ibid., 103.
**Summa Theologica** in 1274, theologian Thomas Aquinas had sought to reconcile ideas of pagan, natural philosophy with those of Catholic doctrine and scripture. In Aristotle, he had sought a means to better understand absolute Christian truth, and in his meticulous arguments regarding the most critical tenets of Catholic orthodoxy, he actually blurred the lines between these two traditions by making Aristotelian natural components both acceptable and essential to Christian theology.\(^6\) The scholastic philosopher viewed nature and natural phenomena as a coordinated system of forces and trends, but acknowledged all of this as accordance with the will of a higher power.\(^7\) Thus, the scholastic interpretation of natural science considered God a divine architect whose perfection could be observed in the logic of His creation. As the basis of the Christian university education in the natural sciences, the Aristotelian framework of nature was not an indelible threat to Christian cosmology, but the method by which Christians could rationally observe and explain natural laws and causes within the God’s macrocosm.

By the time of the Black Death, scholasticism was the basis of all higher education and a testament to the reconciliation of pagan philosophy and Christianity. It emphasized the rational observation and explanation of facts, arguments, and conclusions according to natural and textual evidence. After decades of controversy, the natural philosophy of scholasticism was inherently bound by Christian cosmology, and its philosophers recognized the logic and expectancies of nature as the work and supreme rationality of the Creator. We will now further see that, as the foundational concepts of the scholastic natural sciences, these emphases on the logic of nature and logic in the divine natural world were the basis of scholastic medicine.

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\(^7\) G.R. Evans, *Philosophy and Theology in the Middle Ages* (London: Routledge, 1993), 85.
Where Philosophy Ends, Medicine Begins...

Phrasing varied, but in and even beyond the Middle Ages persisted the idea that where philosophy ended, medicine began. Galen of Pergamum, the second-century Greco-Roman physician who became known as the father of medicine, if not synonymous with it, even titled one of his treatises The Best Doctor is Also a Philosopher. Galen had followed in the distant footsteps of another Greek physician, Hippocrates, and was convinced that, like Aristotle’s view of the world, the body was guided by natural principles. In his own life, he had striven to prove this, and in one of his documented demonstrations, he had, as promised, silenced a squealing pig by compressing its laryngeal nerve, showing his audience that he could understand and, with this knowledge, control the processes of the body. The synthesis of physiological ideas that came to bear Galen’s name was bound by a belief that the human body was, like the Aristotelian view of the natural world, a living system of principles and tendencies, and the ideal physician was a philosopher who knew how to interpret and interact with them.

Thus, from a physician’s understanding of natural philosophy came his understanding of the rational human body, and Galen would largely define physiology until the modern era as a physical concept of innate, but corruptible and manageable, balance. His physiological theories were the foundation of understandings of health and illness, and they were a synthesis of older, natural philosophic concepts regarding the natural elements (air, water, fire, and earth), their physical qualities (hotness, dryness, humidity, and coldness), their emotional temperaments (sanguine, phlegmatic, choleric, melancholic), and the four humors (main fluid components) of

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8 In his 1651 criticism of Galenic medicine, English chemist Noah Biggs phrased it thus: “Natural Philosophy is the Basis or the main Fundamental of Medicine: for where Philosophy ends, there Medicine is to be enterprised,” as quoted by Roger Kenneth French, Medicine Before Science: The Business of Medicine from the Middle Ages to the Enlightenment (Cambridge: Cambridge University Press, 2003), 207.
10 French, 39.
11 Ibid., 40-41.
the body: blood, phlegm, yellow bile (cholera), and black bile (melancholia).\textsuperscript{12} Illness and poor health resulted from the imbalance of the four humors, which itself could derive from poor diet, behavioral habits, and emotions (included among the “non-naturals”) or external corruption (or the “contra-naturals”). These physical factors could also be tested through the observation of one’s pulse or urine, and corrected through purgation and phlebotomy. According to the model of Galen, the body had its own innate conditions and tendencies, but also related to those of the environment. Thus, care of the body required a learned doctor who applied Aristotelian terms of signs and causes to the external conditions and internal health of the body.

While the body could be perceived and regulated in very mechanical terms, doctors found a tremendous supernatural significance to in its innate balance and the rationality of that balance. For Christians, as well as for Jews and Muslims, the innate, logical balance of the body signified, as in Aristotelian nature, the perfection of God’s complex creation, and like natural philosophy, the physiological model of Galen was a path to divine truth. Within centuries of Galen’s death, there were subscribers of his ideas so convinced of their compatibility with Christian beliefs that they actually nominated him a fervent convert to Christianity.\textsuperscript{13} This would have required such individuals to ignore Galen’s vivid criticisms of the Christian faith, and while it certainly reveals the lack of contradiction that some saw or desired to see, others were more realistic, and, as they had done with Aristotle, they adapted the pagan Galen’s framework to religious truth. In one of his many fourteenth-century works, Gentile da Foligno alluded to Galen’s \textit{De usu partium (On the Usefulness of the Parts of the Body)}, which discussed how, according to the Creator’s design, the hair, eyelashes, and eyebrows were intended to protect the head and eyes, and grew naturally.

\textsuperscript{12} Byrne, \textit{Daily Life During the Black Death}, 16
\textsuperscript{13} Nutton, 23, 32.
according to this purpose. However, Gentile did not explain Galen’s criticism of Moses or the belief in divine reverence, rather than reason, as the governor of the logic of human hair. For the physicians who understood Galen’s pagan perspective, like Aristotle’s, the value of his rational contributions was in the fact that they did explain divine truth, which was absolute, even if the authors were flawed in their beliefs. Many of the most foundational contributions to (Christian) scholastic medicine were tenth and eleventh-century Muslim commentaries and interpretations of Galenism such as the *Canon of Medicine* (or simply *Canon*) by Persian physician Avicenna (Abū ’Alī al-Ḥusayn ibn ’Abd Allāh ibn Sīnā, or ibn Sīnā). Such texts not only influenced the Galenic understandings of later Christian physicians like Gentile da Foligno, but also demonstrated the wide validity of rational medicine in different theological contexts that placed similar emphases upon the rational intentions of the Creator, and the divinity of His logic. For Christians, Galen’s extra-Christian medical foundations could reveal the absolute truths of bodily health.

The Galenic theory of the rational body had not been the historically consistent mark of medicine, but was standardized within the scholastic education, and in close association with its Christianized Aristotelian belief in a logical natural world. Beginning in the thirteenth century, particularly in Italy and France, it became the mark of a medical professional, in accordance with both Galen and the scholastic method that governed all higher education, to have a background not only in medical practice, but also in the knowledge of nature with which he could logically explain the rationale and effects of his treatments. At this time, Galen’s actual writings varied in availability and reliability of Latin translation, and usually came to Christian Europe in the form of Muslim commentaries, but they nevertheless set the foundation of the medical curriculum and corresponded to the underlying rational concept of the body. In Italian universities, the arts and

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medicine were often were often in the same faculty, and at the University of Paris, the medical education required a three-year undergraduate curriculum of Aristotelian natural philosophy. In the university setting, healing had to conform to the logical framework of nature because the body and health, as Galen had demonstrated, could be analyzed and influenced through rational means. This was a major transition away from a more hands-on occupation of earlier Medieval medicine, in which practitioners examined and cured illness according to methodical examples and procedures, rather than by rational observation, and to a learned field in which every idea and practice warranted a rational explanation, as scholastic doctors examined, rationalized, and interacted with nature. By the fourteenth century, the university-trained healer was constantly engaged in an intellectual pursuit based on the construction of logical arguments with natural and philosophical evidence and observations of health, illness, and their causes, and he devised actual practical measures from this point. It was further due to their essential knowledge of “physics,” the study of the physical world, that the late Medieval doctors who were taught to follow in the rational footsteps of Galen were given or decided to take the title “physician.”

Even though Galen’s rational view of the body would characterize the scholastic medical degree, the medical degree would not define the scholastic physician. In fact, most physicians did not actually hold degrees, but they and those who did similarly understood medicine as the practical application of natural philosophic knowledge. They adapted older practices, such as surgery and herb mixing, to the newer, philosophical frameworks of nature and health. Those who did not were pejoratively labeled “irrational” or “empirics,” and included barber surgeons and apothecaries who performed manual, external operations (which included grooming, but also

15 Wallis, 197-200.
17 Wallis, xxii.
dentistry, bone-setting, and limb amputations) and prepared medicines, respectively. They did not require internal physiological background and often served as assistants or adjuncts to those who did. These non-Galenic or “irrational” practitioners were typically valid members of the medical marketplace, not charlatans, but through a combination of civic licensing requirements, guilds, and apprenticeships, in addition to university education, the rational medicine of Galen became the monopolizing definition of the trade, even if “unlearned” apothecaries and barber surgeons were still more accessible. Medicine leading up to the mid-fourteenth century was “scholastic” in respect to its rational dimension, as its diverse proponents practiced medical examination and treatment according to logical perceptions of the body, signs, and causes of health and illness, as learned, though not exclusively, in university classrooms.

The scholastic character of medicine not only exemplified that health could be observed and treated according to the natural and logical principles established by God, but that divinely natural logic were valid in the most practical applications of medicine. Following the tradition of Salerno, universities in the thirteenth and fourteenth centuries increasingly recognized surgery on the same level as the practices of the rational physician and as a component of scholastic medical practice. Although the operations of these newly defined physician-surgeons (like those of the typical barber surgeon) might have been comparatively manual, practical, and external (lacking the implication of obvious internal mystery) to those of typical scholastic physicians, doctors of this background were beginning to academically justify their manual procedures with the natural, physiological terms of Galenic theory. Fourteenth-century physician-surgeon Guy de Chauliac told readers in the introduction to his *Chirurgia Magna (Great Surgery)* that understanding a

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18 Joseph Patrick Byrne, *Daily Life During the Black Death* (Westport: Greenwood Press, 2006), 13, 34; Wallis, 255.
19 Ibid., 335.
20 Hannam, 75; Horrox, 255.
21 Wallis, 181.
malady did not consist of “lucky guesses,” and in his later discussion of the Plague, and he cited his authorities, Galen and Hippocrates, as he identified the “apothems” (buboes) as the external result of an internal humoral imbalance, which resulted from external causes. Guy de Chauliac and other scholastic physicians and physician-surgeons examined the external environment and internal bodily health, and their relationship, according to the scholastic medical standard based upon the combination of Aristotelian philosophy and Galenic physiology. Scholastic medicine, like all scholastic trades, emphasized the logic that God had created in all of nature.

_Caring for the Body in Christian Society_

Scholastic physicians justified the science of health according to the same rational ideas that natural philosophers maintained, but the proper place of bodily health and medical practice in Christian society came with the reasoning of scholastic theologians, who asserted the divine purpose of natural healing. Philosophers studied and observed the laws, trends, and relationships of natural phenomena and recognized God’s role as the rational creator and sustainer of a cosmos that was physical, rational, but still holy. Physicians built upon philosophical foundations, but had to practically apply these abstract ideas to a very concrete, human concern: the improvement and preservation of mortal life. As long as the concerns of the body remained subordinate to the concerns of the soul, the scholastic physician, who was educated in the logic of God’s creation, was an honorable player in God’s higher plans for Christendom.

In the late Middle Ages, the Church recognized bodily health as a potential component, not an inherent contradiction, to spiritual health, and medicine as a testament to both Christian ideals and God’s mercy. Health was a public value, natural healing was an act of charity, Pope

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John XXI had actually been an ophthalmologist, and the ecclesiastical limitations upon medical practice were aimed against the potentially overly material concerns of its practitioners. Most Church prohibitions targeted clergy, who might become overly concerned with bodily health or even financial gain, and ignore their holy orders, if not cause the accidental death of patients during risky operations. The laws pertaining to lay physicians emphasized the priority of the soul over the body, such as canon 22 of the Fourth Lateran Council in 1215, which required all physicians called to the bedside of the very sick to call priests to administer spiritual aid, before procedures of bodily health could be carried out. Because “the soul [was] far more precious than the body,” the fear was that “a physician [might] advise recourse to sinful means for the recovery of bodily health.” Without the priest’s attention to the patient’s soul, a physician might permit the patient’s wrongs to go unacknowledged after successful treatment. Saint Jerome might have set a precedent when, writing to a healthy centenarian, he asserted that, “while the health of the unrighteous [was] a gift of the devil to [led] them to sin, the health of the righteous [was] a gift of God to make them rejoice.”

The physician was supposed to facilitate the health of a patient right in spiritual health, to restore the body as the vessel of good works. Medicine preserved the lives of the faithful, so that they could recognize God and live virtuously thereafter.

In their attempt to reconcile the rational mechanisms of the universe with the theology and imperatives of Christianity, scholastic theologians did not simply defend the idea of healing,

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23 Arrizabalaga, 269-270.
24 In 1163, Pope Alexander III at the Council of Tours prohibited regular clerics from leaving religious institutions to study of medicine, see Darrel W. Amundsen, Medicine, Society, and Faith in the Ancient and Medieval Worlds (Baltimore: Johns Hopkins University Press, 1996), 223; in 1139, canon 9 of the Second Lateran Council prohibited regular clergy from studying medicine for profit, see Medieval Sourcebook, “Tenth Ecumenical Council: Lateran II 1139,” Fordham University, http://www.fordham.edu/halsall/basis/lateran2.asp (accessed August 31, 2011); higher clergy were forbidden from performing any surgery involving cautery (burning) or cutting, for fear of endangering lives (this was often cited as part of the Church’s “illegalization” of dissection), from Ronald L. Numbers, Galileo Goes to Jail and Other Myths About Science and Religion (Cambridge: Harvard University Press, 2009), 46-47.
26 Amundsen, 135-136.
but considered the physician’s actions to be a rational force that acted according divine will. In his *Summa Theologica*, and in his typical conversation with philosophical and scriptural passages on the question “Whether man has free-will?” Aquinas stated that, “forasmuch as man is rational [and acts according to his own judgment] is it necessary that man have a free-will.”\(^{27}\) Elsewhere, however, he concluded that “[t]he will of God is entirely unchangeable,” but that “the will [of man] must […] adhere to the last end, which is happiness [goodness].”\(^{28}\) In order to explain in the most fundamental manner the workings of the world with human agency included, Aquinas appeared to suggest that free will behaved within the boundaries of divine will, and that divine intentions ultimately achieved their ends because the desired ends of free will were according to God’s intentions. In such conclusions he identified virtuous behavior as a matter of reason rather than of blind obedience to the expectations of a fickle and inconsistent God.\(^{29}\) Because God had made bodily health a rational concern, He had also made it the correct end to which free will was guided. The efforts of the physician were part of God’s natural and rational plan.

The rational plan of God was further evident in scholastic medical theory, in which the innately balanced, but alterable, body defined the rational physician as the preserver, or restorer, of God’s perfect creation. The doctor examined the body (the four humors and their associated elements and qualities) according to the belief that poor health resulted from humoral imbalance and corruption, and he logically devised the proper solution to rectify its imperfections. This did


not imply a rigid means of prescription or remedy, but some sort of guiding principle at work in the way that doctors responded to illness. Thus, the illnesses that God had permitted or created had some logical response that was to be applied, and that was implied solution through rational processes of medicine that He had created to preserve the body. With these Galenic principles of sickness, health, and the role of the physician, we see Aquinas’ conclusions illustrated: through educated judgment of an illness or its possibility, the doctor developed a treatment or prevention, and freely acted accordingly. Even within the free agency of man existed divine motions made by God, which were within the deeply logical intentions of human action. Healing was not only a justifiable component of spiritual life, but also a rational part of God’s plan.

The Gift, Duty, and Value of Scholastic Medicine

Scholastic physicians themselves understood medicine as a natural, manual, and logically calculated art that God not only justified, but actually made possible. Physicians identified the logical nature of medicine, as well as advances in knowledge, as an actual divine gift. The early thirteenth-century physician-surgeon Henri de Mondeville credited God with giving all men, as to Galen, “[their] own natural mental aptitude” in order to advance the progress of medicine and all scientific knowledge.\(^\text{30}\) He gave glory to man’s ability to understand the natural properties of medicine, as well as the ability to advance them. He also furthered the perception that the reason that grounded medicine, as we have discussed, was divinely endowed.

Later medical writers took this idea further as to imply that the actual healing was the result of God’s actions through the applied properties of natural healing. In the introduction to his post-Plague treatise *Of the Wound of Fistula in Ano, and of the Physician’s Behavior, and of the Instruments Necessary for the Fistula*, fourteenth-century English surgeon John de Arderne

\(^{30}\) Wallis, 222.
promoted the scholastic, or “rational,” surgery of Galen (as medieval physicians understood it), but also emphasized ethical issues of his trade. Despite Arderne’s rational explanation of the procedure for the case of *fistula in ano* (a tubular ulcer that forms on the inside of the anus and eventually pierces the skin of the buttocks or the region around the anus) and his expertise as a proctologist in general, he stressed pious humility in carrying out this very hands-on procedure.31 He not only prayed “that the grace of the Holy Spirit […] be upon this work [and] that he may vouchsafe and prosper it,” but said that he “cured [his patient] and with the Lord’s intervention […] healed him perfectly within six months.”32 The author’s careful attention to the role of the divine in his own surgical treatment further implied that God not only gave man the principles and mental faculty to practice medicine, but that He also played a critical role in its success. John de Arderne’s emphasis on humility and prayer suggested their crucial role in his practice to the point that they were useful, if not necessary, in the actual healing.

Other physicians took this concept even further, professing that medicine was not simply a gift given by God, but a duty expected by God. Surgery was the most manual set of treatments, and in the words of physician-surgeon Guy de Chauliac, the last resort. Nevertheless, Chauliac not only stressed ethics and implied God’s role in successful healing, like his contemporary and fellow physician-surgeon John de Arderne, but he also emphasized the divine expectations for the use of medicine. In the introduction to his *Chirurgia Magna*, he described healing as being accomplished with “divinely inspired efforts” but built upon Galen’s condemnation of those who did not apply reason to their comprehension and practice of medicine. Among the unlearned and illogical “sects,” he included “the women and idiots who [relegated] all sick persons to [s]aints, [whose] only treatment [was] based on [this] prayer: ‘The Lord giveth as he pleaseth, and he deals

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31 Ibid., 455-456.  
32 Ibid., 456-458.
with me as he pleases.” While admitting that there were cases when it was not appropriate not to operate (when it was either too dangerous, disapproved of by the patient, or incurable), Guy more generally implied that not taking action when it was possible was not only foolish, but also contrary both to the ideals of medicine and to God’s expectations for its utilization. To Chauliac, medicine was a gift as well as a duty, if not an honorable duty, for those who were capable of it. Moreover, Guy is remembered not only as a skilled and knowledgeable practitioner, but also for his relentless and ruthless use of surgery, and thus committed to this perceived duty.

The most sophisticated connection between scholastic medicine and God’s divine agency derives from the understanding that God not only provided the means and the cure, but also did so according to the doctor’s proper application of His principles. John de Arderne had described God’s role in his manual procedure, but beyond both predecessors and contemporaries, Guy de Chauliac suggested that scholastic medical practice was a calculation, founded upon God-given, logical and natural principles with a God-given solution to those who met the proper terms and expectations, like a math problem with a given and defined answer attainable through the proper operations. In this manner, music in the late Middle Ages was arguably similar, having inherent structures of interval and harmony, and regarded as a branch of mathematics, and this might also explain Guy’s claim that a surgeon should learn other arts. Altogether, scholastic physicians suggest in their writings that they perceived medicine with a divine purpose, and that they saw themselves as having the knowledge and duty to achieve God’s intended remedy through natural terms and procedure. With the physician’s knowledge and hard work, and with God’s will, the

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33 Chauliac, 115, 124.
35 Kelly, 148; Chauliac, 126.
desired cure would theoretically result. In the end, physicians suggested that medicine existed as a necessary duty and was also logically calculated, because God had made it so.

Conclusion

Scholastic medicine by the time of the Black Death was based upon the vast and complex unification of pagan philosophy and Christianity upon which all higher learning was based. This was a science in which the Aristotelian framework of nature provided a method for examining, classifying, and interacting with God’s cosmos, and in which the Galen’s rational physiology provided a method for identifying and treating God’s creation. Nature and the body were the logical and living creations of God: each was both rational and divine, and rational because it was divine, and divine because it was rational. Scholastic medicine was “scholastic” in respect to its Christianized philosophic foundations and physicians were “scholastic” in respect to their practical adherence to and application of these Christianized philosophic principles. Christian society acknowledged the learned physician as the purveyor of God’s rational gift of medicine, for the benefit of the faithful and in service to the higher concerns of the eternal soul. Learned physicians acknowledged God as the creator of natural principles, whose application brought ends according to God’s will. In the end, medicine by the time of the Black Death might be called “secular” because it dealt with the body and natural principles, but the true depth of its theory and practice was divine in its principles, intentions, and very results.
According to one Austrian chronicler of 1348, “[s]cholars could not decide whether such a deadly year was due to the vagaries of the planets or the corrupted air, but could only commit everything to God’s will.”¹ The chronicler may have been more of an observer than an authority on philosophy, but his assessment rings true regarding medical views on the causes of the Black Death. While scholastic medical thought in the mid-fourteenth century provided for an immense diversity of opinion in explaining the causes of the Plague, each of these causes could be traced back to the single origin of divine will. During the first outbreak circa 1347 to 1350, scholastic doctors explained the pestilence of many names, its arrival, and its transmission through various series of natural causes. Despite these diverse and complicated explanations, they perceived God as the ultimate cause of all natural events, and suggested no contradiction to the more explicitly phrased belief that the pestilence was the result of God’s wrath and man’s sins, as Pope Clement VI and others, clergy and laymen, had preached and believed.

The intellectual background of university-educated physicians and the other physicians who adopted the same theoretical principles in the fourteenth century, and we will examine the variety of causes that these physicians ascribed to the Plague and their common bond. We will see that through a vast, but unified, philosophy, physicians recognized God’s role in prompting illness through a nearly endless number of natural means, as the ultimate cause of circumstances that could affect, if not oppose, bodily health. Furthermore, an analysis of scholastic medical works on the disease, its symptoms, causes, and measures against it, or Plague tractates, reveals

¹ Horrox, 60.
how the Christian doctors of Western Europe held this common intellectual bond while adopting a variety of specific approaches to understanding the unprecedented disease.

In our examination of this diverse, yet unified, approach to diagnosis of the Black Death by scholastic physicians, we will discuss both the rational basis and results of their observations. We will first explore the scholastic method by which physicians applied the theoretical side of their education in their analysis and explanation of the pestilential environment through an often long and complex causal chain of natural signs and events. Next, we will explore the concept of the first mover or prime cause inherited from Aristotelian philosophy, and how physicians and theologians, thanks largely to the contributions of Thomas Aquinas, were able to recognize God in relation to this highly-naturalized view of the world. Finally, we will examine the variety of natural causes ascribed by physicians to the Black Death, and how these astrological, terrestrial, meteorological, miasmatic, and infectious causes could be traced back to God's own actions or permission, with His wrath undisputed. We will conclude, based on written accounts, that the theoretical standards of medicine were evident in the philosophical processes and conclusions of natural observation. Furthermore, we will see how scholastic physicians ultimately traced these conclusions back to God, the first mover in Christianized natural philosophy.

Finding the First Cause

The most immediate observation of the cause of the Black Death was the most practical, which described the closest and most direct contraction of the illness, was the most unifying in Plague tractates from between the years 1348 to 1350. In some manner, physicians explained corruption or contagion of the air either in association with the arrival of the pestilence or as the
concrete definition of the pestilence.² By “definition,” the medical faculty of the University of Paris classified the pestilence as the result of the “air corrupt in its substance, and not changed in its attributes,” meaning that the air was now susceptible to corruption, but still “air.”³ Others like Jacme d’Agramunt, the anonymous physician of Montpellier, and Gentile da Foligno defined the pestilence as the substantial change itself, meaning that the air was now something else.⁴ Part of this distinction originated in the Aristotelian concepts of substance and accident, by which some identified changes in the qualities of the air (accidental), and the latter group recognized a change in what the air actually was (substantial).⁵ The other aspect of this distinction was whether these changes, such as the corruption of the air, or the result of these changes, such as the corrupt air, constituted the actual cause of the sickness. Even physicians, like those mentioned above, who made precise distinctions identified some alteration of the environment and based these theories on academic understandings of natural philosophy. As we saw in the first chapter, scholastic physicians believed that the body was innately balanced. Those who commented on the Plague acknowledged it as something in opposition to this balance and developed theories regarding the change, peculiarity, and harmful contra-natural (contrary to humoral balance) qualities in the environment. Some explanations were precise causal chains, while others were numerous and are only loosely related by their ultimate natural cause and result. For all of the wide diversities and disagreements, however, explanations were united by a Christianized Aristotelian perception of nature and natural shifts directly connected to Galenic physiology. We will see that at the beginning of every physician’s explanation of causes was God.

² Palazzotto, 72.
³ Arrizabalaga, 242-247.
⁴ Palazzotto, 78.
⁵ Hannam, 47.
As we have understood the intellectual developments in natural philosophy and Galenic medicine, which maintained that every natural thing was logically connected, we will examine how every observation indicated a long and intricate chain of causes and effects of nature. The early eleventh-century Persian physician Avicenna (Abū ’Alī al-Ḥusayn ibn ’Abd Allāh ibn Sīnā, or ibn Sīnā) had been perhaps the greatest Eastern contributor to European medicine by this time, and his encyclopedic *Canon of Medicine* (or simply *Canon*) reinterpreted and elaborated upon Galenic principles. One of the points relevant to epidemics that he had outlined was the link between distant and near causes that ultimately resulted in pestilence. What this essentially meant was that in the context of a pestilence such as the Black Death, the nearest, most bodily occurrence could be traced to adjacent and then more distant causes. It is from this underlying principle of the Plague that the physician, who applied logic to every observation, could trace illness from the body, through natural surroundings, and back to a single source.

As physicians founded the processes of diagnosis, they traced a chain of events that led from the observable illness in the body to a first cause: God. Aristotle had claimed that a first mover or first cause was the agent that moved all agents, the cause of all causes. As scholars ignored the fact that Aristotle had denied any belief in a creator, this idea was both rational and true to the belief that the Judeo-Christian God ruled over and acted within the pagan framework of natural causes. Just as Avicenna had recognized this, so did the Christian scholars of the late Middle Ages. Prominent among them was the thirteenth-century theologian Thomas Aquinas, whose *Summa Theologica*, in defending God’s existence, stated, “it is necessary to arrive at a first mover, put in motion by no other; and this everyone understands to be God.” Physicians observed the world as a logically connected series of objects and events, according to natural

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6 Campbell, 36-37.
philosophy. Nonetheless, for every cause was a preceding cause, and that the first cause of every other cause according to Christianized-Aristotle was God.

While none of the tractates from the first outbreak explicitly excluded God’s ultimate role in natural causes or in the cause of the Black Death, the earliest treatise, by Jacme d’Agramunt, and Utrum mortalitas, que fuit his annis, fit ab ultione divina propter iniquitates hominum vel a cursu quodam naturali (Whether the Mortality That Has Occurred in These Years Is Because of Divine Wrath for the Iniquities of Man, or Because of Some Natural Cause) did suggest more precise conceptions of divine agency. Although Agramunt provide a divine explanation among others, he also cited the Bible to argue, “God only involves Himself directly and effects such changes in the atmosphere when He decides that men are iniquitous.”8 Similarly, the anonymous tractate dismissed the possibility of divine vengeance because of the Plague’s indiscriminate attacks on both the pious and the iniquitous. Both Agramont and the anonymous physician might have specifically wished to avoid attributing such a perceived inconsistency to God’s actions, but we understand from Aristotle, Avicenna, and Aquinas that even the most natural causes would be traced back at least to God. Thus, even in their apparent denial of a divine cause, both physicians were more concerned with the theological implications than the natural logic of such a possibility, and neither one denies that God would have had some role in the natural causes. Rather than denying God’s role, we should understand that these two particular physicians demonstrated a more refined distinction between divine cause and natural cause through divine permission, though both ultimately required God’s role.

After the Paris condemnations of 1277, which had Christianized Aristotelian natural logic by requiring the acceptance of the non-logical intervention of God beside the logical explanation of nature, no explanation, no matter how natural, could have been explicitly “godless.” By the

8 Palazzotto, 63-64.
fourteenth century, Christian philosophers considered the natural order of Aristotle autonomous and ruled by logical principles (or secondary causes), but still believed that God (the prime cause or first reason) had ordained these laws when he created the world, ruled over them, and could contradict them. In this view, God was always “what,” and nature was always “in what way God attained his aims.” Although Agramunt and the anonymous physician described God’s direct intervention and astrological causes as separate possibilities, they did not reject the causal connection between divine agency and natural events. The Paris medical faculty gave one of the lengthiest natural, etiological explanations but also maintained the “fact that any pestilence proceeds from divine will.”

Thus, the seeming disagreement between the Paris masters and Agramunt and the anonymous physician is better identified as a differing degree of emphasis on God’s role in natural causes. They more likely made distinction between natural cause and what might be considered a “miracle,” something contrary to philosophical logic. Either way, Jaume d’Agramunt in particular not only considered both direct divine wrath and natural occurrences, but all causes together, and the anonymous author did not define any natural cause as “godless.” Thus, such direct distinctions between divine and natural causes were not based on the separation of God and nature, but a refined distinction of His role in nature. Altogether, these physicians’ opinions demonstrated the complex relationship between God and natural causes in the cause of the Plague, which others would acknowledge in much greater unity.

**Astrological Causes**

In scholastic prognosis of the Black Death, astrological influences were a distant and universal means of attributing natural causes to the epidemic in a manner that still ultimately

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9 Arrizabalaga, 249; in his reconciliation of Plato’s *Timaeus* with the book of Genesis, twelfth-century theologian William of Conches incorporated God as the creator of and reason for all things, as explained by Hannam, 63-65.

10 Horrox, 163.
acknowledged the role of God. Simon de Covino’s tractate *De judicio solis in conviviis saturni* (*Concerning the Judgment of the Sun at the Banquet of Saturn*) provided an extremely accessible interpretation of this causal connection between distant astrological occurrences and God. His was not written not as the other medical texts but as lengthy allegorical poem, in which Covino, with little mention of God, both allegorized God’s judgment of man’s sins and reconciled it with distant astrological events and their pestilence-causing effects.\(^{11}\) Drawing upon his use of verse, the physician and astrologer characterized the celestial bodies as members of a judicial body: Mercury, “prosecutor in the court, proposes that the crimes of men are greater than they were at the time of the Flood, and brings celestial records, charters and documents to prove his case,” then “Sol gives his judgment and condemns the human race to pestilential death [and] appoints Saturn, Jupiter and Mercury to put this judgment into effect.”\(^{12}\) He explained that while the “execution of the judgments on [man] seems […] to come from the conjunctions of the planets,” they truly originated from an even more distant source, which causes the conjunction, just as Sol “gives his judgments on all the other matters signified by the conjunction of the planets.” Thus, Simon de Covino not only succeeded in presenting the astrological elements of the pestilence in a manner simplified by his use of allegory, but he also maintained the highest role of God, in His divine judgment, as the agent behind them. Simon de Covino illustrated, as other physicians at least acknowledged, that just as Sol could pass judgment and direct the subordinate planets, God directed all of His creation through high, distant, and universal natural causes.

Astrological descriptions were the most distant and universal means of attributing natural causes to God, and their observation is a traditional component of the physician’s examination of the causal chain of natural events. The physician John of Burgundy, in a plague treatise written

\(^{11}\) Ibid., 165.
\(^{12}\) Ibid., 164-166.
about fifteen years later during the second or third outbreak, cited medical authorities to justify
the necessity of astrological observation in the prognosis of the disease. He quoted Hippocrates’
*Epidemia*, claiming that “no one ought to be put under the care of any physician who is ignorant
of astrology,” explained how Avicenna’s *Concerning the Cure Of Fevers* emphasized that it was
“impossible [for] someone ignorant of the cause [to] cure the disease,” and stressed the necessity
of understanding the “immediate and ultimate cause,” according to Averroës.\(^{13}\) Burgundy stated
according to tradition and authority that the understanding of distant causes was necessary, and
that it was necessary for a physician to be able to recognize these in astrological occurrences. As
Covino had provided both practical and theological justifications for the application of astrology
in the understanding of a universal illness, Burgundy attests to its tradition. This made astrology
a common step in the chain of events that linked God to the arrival of the pestilence.

This clear connection to God’s role, as demonstrated in Simon de Covino’s poetically
allegorical treatise, as well as the traditional commonality of astrological observation in the
prognosis of the pestilence did not preclude the diversity of astrological causes that the authors
discussed in plague tractates. This is understood in the respect that not every physician who
discusses astrological causes concurred entirely with Covino’s explanation of the cause or even
the specific astrological occurrence he cited. The earliest tractate, that of Jacme d’Agramunt,
who did not witness the Plague before he wrote on it, did discuss the “putrefaction [of the air]
through the influence of some conjunction or appositions of the planets” and cited the authority
of the thirteenth-century philosopher and theologian Albert of Cologne (Albertus Magnus).\(^{14}\)
The compendium of the Paris medical faculty not only stressed what appears to be the same
conjunction, but also cited the actual event in addition to authorities. While they similarly allude

\(^{13}\) Ibid., 186.

\(^{14}\) Aberth, 52; Palazzotto, 65.
to Albertus Magnus (misattributed as “Aristotle”), they also directly cite the effects of March 20, 1345 at one o’clock in the afternoon, when a “major conjunction of three planets [Jupiter, Mars, and Saturn] in Aquarius, along with other earlier conjunctions, [caused] a deadly corruption of the air.”\textsuperscript{15} Despite its lack of poetic verse, the Paris compendium clearly demonstrates both a common description and event with Covino’s tractate, though the fact that it predates it implies some influence. Altogether, the diversity of analyses of a single, distant astrological occurrence demonstrates the many ways in which one conjunction created by God, could suit a variety of natural causal explanations for the universal pestilence in the air.

With the tractates’ diversity of astrological explanations also came the description of different celestial events that could be attributed to God. While other astrological descriptions bare less of a similarity to those of the Paris faculty or Covino, Agramunt alluded to Albertus Magnus, Gentile da Foligno mentioned the 1345 conjunction in his second consilium, and the anonymous physician of Montpellier made a unique conclusion based on what appear to be the same astrological events.\textsuperscript{16} As he explained, the dominance of Saturn (a cold planet) caused the under-ripening of plants, which, when eaten, created “dangerous viscid and windy moisture, and [drew] blood into the liver, […] inevitably [causing] the sickness and poisoning.” Although did not stress the explanation, Alfonso de Córdoba discussed a separate astrological event from that of 1345: “an eclipse […] occurring immediately before [the present year of 1348] in the sign of Leo, accompanied by a powerful conjunction with the unlucky planets.”\textsuperscript{17} The fact that Córdoba cites a unique occurrence reveals that the Paris compendium’s likely influence on descriptions of 1345, found in later treatises, was certainly not the explanation for all astrological observations.

With such natural philosophic logic, explanations could be wide and diverse. Above all, any and

\textsuperscript{15} Horrox, 159.
\textsuperscript{16} Palazzotto, 65-66.
\textsuperscript{17} Aberth, 45-46.
all of these explanations could be unified by their acknowledgement of the natural-causal link to God and God’s wrath through astrological occurrences with more immediate effects.

The common astrological opinions were further diverse due to the fact that some were direct influences and others the natural basis of a causal chain. Only four of the tractates by Christian doctors lacked any mention of astrology: these are the tractates of Master Albert, John Hake (ironically an alleged astrologer, in addition to a physician), Dionisius secundus Colle, and the anonymous Wyder dy epidemi oder wider dy buse luft dez pestilencie heyssit und behudet den lijf des menschen vor vineyne eyter, vor bossen bulen, drusen, unde apostemen (Against the Epidemic or Against the Bad Air of the Pestilence and Preserving the Life of Men Before the Poisonous Matter, Bad Boils, Glands, and Imposthumes).\textsuperscript{18} The majority of remaining tractates at least vaguely alluded to them, if not as the most practical explanation for the universal nature of the epidemic, as in the case of Giovanni della Penna and others who are often more concerned with the immediate causes, effects, preventions, and treatments, such as Gentile da Foligno and Jacme d’Agramunt.\textsuperscript{19} Covino and the Paris masters very clearly emphasize their astrological explanations as God’s initial natural cause of other natural causes, creating a clear but logical connection between the divine and the horrific natural (technically contra-natural) effects of natural causes. Fifteen years later, Guy de Chauliac differed little from the University of Paris’ detailed method etiology and prognosis or its cited occurrences, suggesting, like Burgundy, the lasting validity of this concept and, of astrological prognosis in general, at least in select regions

\textsuperscript{18} Palazzotto, 46, 71.
\textsuperscript{19} Ibid., 66. The emphasis on practical diagnosis and treatment of the illness appears to have been, as others have observed, more characteristic of southern physicians like Agramunt (Spain), Foligno, and Penna (Italy), while the Paris faculty and others in the region provided deeper explanations of the etiological causal chain stemming from astrological events. Claims that Simon de Covino, a Parisian, did treat the illness and that the Paris masters did not demonstrate that these regional differences, and not differing practical experience alone, might have contributed to such emphases upon astrological etiology.
of France and in the description of the first outbreak.20 Within the philosophical framework of scholastic physicians, the emphasis on natural causes created by other natural causes provided a logical connection between the divine and more immediate causes of the Plague.

Those who stressed this idea explain a variety of other causes as the at least implied result of higher astrological causes, and more vividly illustrated the resultant presence of God in the observable particular causes of the Plague. The years just before the Black Death witnessed an increased frequency of “reported incidence of environmental alterations and peculiarities,” and in addition to the climate shift of the early fourteenth century that weakened the availability of food (thus, famine), accounts cited “meteoric phenomena, earthquakes, unusual and frequent heavy rains, winds, and floods.”21 Much as chroniclers and religious writers were drawing connections between these seemingly apocalyptic (indeed, the four horsemen themselves, with the Hundred Years’ War waging simultaneously) occurrences and the arrival of pestilence, physicians “read” the environment as a natural, philosophical, causal chain. As the Strasbourg physicians vaguely stated that, “the disease was caused by the corrupt nature of the stars which poisoned the air,” the anonymous physician of Montpellier drew a connection between heavenly bodies and their effect upon the corruption of vegetation.22 Jacme d’Agramunt, based on past experience, as he had not yet witnessed the Plague, implies that the infection of earth or water, or both, might result from the astrological causes.23 While Simon de Covino’s poetic tractate might have more vividly explained the astrological causes, the Paris compendium elaborately stressed the universal-to-particular causal chain connecting them to terrestrial causes. They speculated a variety of more terrestrial causes bearing some sort of connection to the 1345 conjunction: the corrupted air was,

20 Chauliac, 250.
21 Palazzotto, 86.
22 As paraphrased by Ibid., 81.
23 Aberth, 51-52; Palazzotto, 121.
of course, the most obvious and immediate (all who breathed were at risk, thus the Paris masters considered the effect of the corruption to be the definition of the “pestilence”), but the masters also mentioned Hippocrates’ theory of “unreasonable weather.”

In the end, such accounts of the astrological causes demonstrated how the distant, but logical motions of nature could carry into the terrestrial setting. Moreover, astrological explanations for the cause or basis of natural causes for the Black Death were traditional, logical, and popular in medical accounts, and at least implied a consciousness of God’s role in creating the epidemic through them.

**Terrestrial Causes**

As the same natural principles that guided as the planets and stars inherently guided all of nature, the nearer terrestrial causes found in plague tractates were typically not as elaborate or as intricately connected as the astrological, etiological explanations, but nonetheless could be traced to God’s will through nature. Despite their emphasis on astrological explanation, even the Paris faculty discussed its terrestrial causes of the corrupted air in a manner that may be interpreted as separable from their lengthy astrological-causal description, but still contingent on the processes of nature through which God at least indirectly acted. One such example, which appears to be an alternative to the astrological occurrence in their discussion of cause, is “the escape of rottenness trapped in the center of the earth as a result of earthquakes [that has] recently occurred.”

The tract *Utrum mortalitas, que fuit hijs annis, fit ab ultione divina propter iniquitates hominum vel a cursu quodam naturali* (Whether the Mortality That Has Occurred in These Years Is Because of Divine Wrath for the Iniquities of Man, or Because of Some Natural Cause) cited Hippocrates on “terrestrial fumes and poisonous vapors which infect the various regions of the world,” observed

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24 Horrox, 161.
25 Ibid., 161.
that “such vapors enclosed in the earth, as in caverns and pits, suffocate those who enter,” and concluded that “the earthquake of 1347, and particularly the one which occurred in Carinthia, preceded the epidemic which began there and spread through Germany.”

Citing “the bad air of the pestilence” in its title, the Wyder dy epidemie oder wider dy buse luft dez pestilencie heyssit und behudet den lijf des menschen vor vineyne eyter, vor bossen bulen, drusen, unde apostemen (Against the Epidemic or Against the Bad Air of the Pestilence and Preserving the Life of Men Before the Poisonous Matter, Bad Boils, Glands, and Imposthumes) at least noted corruption of the environment as or as related to the pestilence, as most of the other authors did.

These physicians did not discuss any astrological basis for the nearer natural causes that they simultaneously or exclusively provided, because scholastic diagnosis, which accepted God’s role in all nature, did not require one. The immediate causes of climate shift, earthquakes, and even the changes of the air commonly attributed to more distant causes were still founded in the logical framework of natural causes that dictated all of God’s creation. With or without motions of the stars and planets, God could prompt illness through natural means.

**Airborne Causes**

Miasma and infection were localized, immediate causes, but physicians ascribed them to the pestilence and even traced them back to some initial cause or causes for which God had been responsible. Some of the physicians writing between 1348 and 1350 differentiated between two types of Plague: one evidenced by odors, mists, and other signs in the physical environment, and another, of a contagious form, which came from the exhalation of foul air by the sick. Despite their differences, both could be linked to the same sickness and to the same larger causes, such as

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26 As paraphrased by Palazzotto, 79.
27 Ibid., 81.
28 Ibid., 72-73.
the astrological and terrestrial events previously discussed. The corruption of the air, as we have seen, was the common topic of immediate causes in the tractates that resulted in negative effects on the individual’s health, and this was clearly traced back to earlier causes in more cases, some more elaborate than others. *Quaeritur primo quae sint aegritudines nunc currentes* (*First It Is Asked What Are the Diseases Now Current*) emphasized, as the Paris faculty briefly speculated, the link between climate and corruption of the air that everyone breathed. This observation demonstrates how air corruption could be both universal, as it was in many of the astrological causes, and localized, within certain climate regions and not necessarily contingent upon larger universal causes. The anonymous Montpellier physician stressed a similar idea in his discussion of the planets’ eventual effect on food sources and the internal corruptions of humoral health that resulted from their presence and consumption. In the vast chain of natural causes that physicians claimed to observe in their prognosis and diagnosis, the universal could be traced to the nearby air that communities and individuals inhaled. God could work through all of nature in order to affect health, but Christian physicians upheld that He could even move beyond that.

A number of the authors also described a further progression of the disease, not just from the corruption of the air to the body, but from the body and beyond, in terms of contagion from the already sick to the healthy, which nonetheless conformed to a belief in divine agency through natural causes. The anonymous Montpellier physician gave a unique explanation for the human transmission of the Plague that was founded on natural principles on the reflection and refraction of light. His theory was the passing of the Plague from eye contact with the sick, which he cited the theories of “Euclid concerning burning glasses, and concave and reflecting glasses” and the belief that “thin poison moves faster than the heavy air.” Other physicians rested on the more

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29 Ibid., 80, 84.
30 Horrox, 182, 184-185.
conventional statements by Galen on the dangers of the bad air that exhaled by plague-stricken patients.\textsuperscript{31} The belief that God could ultimately work through the air expelled by the human body was not only common in Christian Plague tractates, but also far from controversial in Christian Europe because it was grounded in a very specific acceptance of the causal chain of nature that linked God to the most direct and bodily causes.

The most profound evidence of Christian acceptance of human transmission can be found in the fact that it was controversial in the medical thought of Muslim Spain, where the principle of contagion was in conflict with theological tradition because it implied recklessness in God’s wrath and an excuse to flee the sick.\textsuperscript{32} Muslim physicians of this region who recognized a link between corrupted air and dangerous contact with the sick were careful to maintain Avicenna’s interpretation that the passing of disease between people was really a transmission of corrupted air, and that “[t]he breath, cough, or sneeze of a patient was putrid air just as was the putrefaction borne by the wind.”\textsuperscript{33} In his treatise, Ibn al-Khatīb did famously advocate some sort of belief in the contagious nature of the sickness, but more explicitly stated that, “to play deaf to such an inference [on contagion] is malicious, perverting blasphemy against God, and holding the lives of Muslims to be cheap.”\textsuperscript{34} In his earlier treatise, the Muslim author Ibn Khātimah more safely explained that, “God has placed in the nature of the matter [that] the evil of this disease spreads and infects the surroundings.”\textsuperscript{35} In the end, both maintained that corrupt air persisted, either in the breath of the sick, or just carried by it. The controversy in the Muslim tractates more vividly demonstrates that Christian scholastic medicine not only accepted ideas regarding the persistence of the Plague through the objects and people infected by it, but that there was some acceptance or

\textsuperscript{31} Palazzotto, 95, 76.
\textsuperscript{32} Stearns, 77-80.
\textsuperscript{33} Byrne, \emph{The Black Death}, 25; as paraphrased by Palazzotto, 94, 96.
\textsuperscript{34} Stearns, 80.
\textsuperscript{35} Palazzotto, 97.
ambivalence that permitted higher degrees of this belief. The scholastic tractates from Christian Europe demonstrated and justified ways by which people could involuntarily spread the disease that God, in some natural manner, had ultimately created.

*Artificial Causes*

The greatest extent to which human agency could play a role in the pestilence was in the belief that people themselves had concocted it, and while the belief was rare in medical thought and ecclesiastically condemned, it was neither exclusively mentioned in medical tractates as the only cause nor as a cause that excluded the will of God. Writing after the first outbreak, Guy de Chauliac emphasized the “popular opinion” of some universal astrological cause and a resultant corruption of the air and humors. Those whom he considered “at a loss as to the cause” were the ones blaming and massacring Jews and paupers and ostracizing foreigners and “anyone who bore traces of topical—powders and ointments—[whom] they shunned […] for fear of venoms.” 36 It would appear that Guy criticized this view, which is probable as he was at Avignon when during the first outbreak, in service to the same pope who in 1348 had defended against the lawless and unfounded accusations and pogroms against the Jews in Strasborg. While Guy might have been avoiding matters of opinion that could have complicated his career by bolstering defense for the pogroms, it is entirely possible that he simply disagreed based on his reasoning. Moreover, Pope Clement VI had also condemned the pogroms of Strasborg for their irrationality and lack of due process in dealing with Jewish suspects. 37 His implication was that, while the Plague was indeed the work of God, poisons and those who used them could have played some role in the process. Both of these condemnations seem to criticize the lack of logic behind them, but not necessarily

36 Chauliac, 249-250.
37 Horrox, 222.
the role of poison in explanations of cause. There was not necessarily a contradiction between human action and divine will, even in the case of manufacturing a disease or its effects, but it was also not the only explanation of the physicians who described artificial causes.

At least in Christian scholastic medicine, physicians could acknowledge the role of God beside the human explanations for the Plague, as well as inherently within the ingredients, if not the composition, of so-called poisons. Those who maintained theories of poisonings as the cause of the Plague, such as Jacme d’Agramunt and Alfonso de Córdoba, appear to come from regions of Spain, where such claims that might implicate Jewish conspiracies would have been common. Nevertheless, even as Jacme d’Agramunt accused “wicked men, sons of the devil, who by means of very false ingenuity and wicked skill, corrupt[ed] foods with various poisons and medicines,” and Córdoba stated that the pestilence “proceed[ed] out of a deep-seated malice through the most subtle artifice that can be invented by a profoundly wicked mind,” neither explicitly referred to the Jews and both had some form of medical logic on their side.38 Both, particularly Agramunt whose only manner of explanation was wide speculation in the absence of direct experience with the disease, cited this reason among a variety of others, astrological, terrestrial, and metrological. Córdoba, who specifically emphasized such an explanation for pestilence, also described several pestilences—causes of illness—in his treatise. The other two were astrological and resulted from an earthquake, and ceased “within the space of a year.” Córdoba implied that a pestilence more overtly divine-via-natural-causes might have been one of them, as the continuing devastation of which he wrote was simply another cause of epidemic, which was also localized and exposed to the moving wind “opposite the city or towns that [one] wishes to infect.”39 Both treatises further

38 Arrizabalaga, 242, 256; Aberth, 46.
39 Ibid., 45-46.
demand a deeper explanation for what poison signified in medical thought, and how God could further be behind the logical blending of poisonous ingredients.

In much of scholastic medical thought, and certainly between 1347 and 1350, the term “poison” is not clearly defined in its substance or its relationship to the rational principles of sickness and health that God ultimately controlled. Regarding its very substance, poison to some might have been “something that destroyed the substance of the body or attacked the vital spirit and was therefore truly antithetical to medicine,” while for others it might also define the natural ingredients in simple and compound remedies. Thus, the Montpellier physician’s description of contagious glance could have easily been interpreted as poison for its contra-natural damage, while we shall see in the following chapter how poison of the second definition was a necessary component in natural remedy for the Plague. In other cases, however, poison was both natural and a positive substance crafted with sinister ingredients. Gentile da Foligno commented in his Consilium ad morsum serpentis (Consilium Regarding a Snake Bite): “let physicians consider the marvelous effects of poisons and the marvelous properties of things against them, and in all these see the beauty of glorious God.” While this reasoning, with Agramunt’s and Córdoba’s claims, provided rational basis for the charges against Jews, they also most certainly expanded the scope of the term “natural,” as something that resulted from human interaction with nature. This also implied that medicine and medical-philosophical knowledge were double-edged swords that, in the mind of an ethical physician, could and should be used for good, but might not. Moreover, it was the physician’s intention to examine and understand natural causes, not divine motive, in

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42 Arrizabalaga, 259.
his process of observation, and the explanation of poison, even alone, did not necessarily exclude God’s role, but emphasized, as we shall explore in the next chapter, the variety of natural effects that divine agency, through the most human means, could have.

**Conclusion**

In the end, natural philosophy was the foundation of scholastic medical observation, and how in the context of the Black Death physicians could recognize the role of God in causing the disease through an endless variety or series of natural and observable causes. From the emphasis on the Christianized interpretation of Aristotle’s idea of the first mover—the cause of all other causes—that asserted God’s role in all natural occurrences, explanations of the Black Death that were astrological, meteorological, infectious, and even the artificial were reconcilable with both a theistic cosmology and the belief in divine wrath as the initial cause of the Plague. Moreover, the various natural explanations and varying emphases on God’s role, while grounded in certain concepts of natural cause, could be widely interpreted. Even those who seemed to question how direct God’s role was still recognized the natural causes and chains of causes established a means by which the explanation could ultimately be traced back to God. All in all, the role of God was inherent in all causes within the natural framework of medicine, and physicians’ explanations of the Black Death, in a variety of ways, demonstrated this.
Chapter IV
The Divine Logic of Healing

Even if doctors acknowledged divine agency in the cause of the Plague, they also played a role in the form of the preventative and curative measures against it, and even then suggested a theological justification. This general belief was that they learned about God’s creation for the benefit of man, but ultimately for God’s glory. Through the physician’s applied knowledge and interaction with the logical nature God had created, he committed himself to piously healing the sick, so that those healed would recognize God’s mercy and continue their lives virtuously, all according to divine will and goodness. This same justification, as physicians demonstrated in writing, persisted in the context of God’s supposed punishment: the Black Death.

This was not a unanimous understanding among Christians at the time of Plague, when some thought the resort to medicine to be impious and doctors on par with atheists for opposing God’s will.¹ In the introduction to The Decameron, Giovanni Boccaccio described inadequacies of medicine against the epidemic and the mass of unqualified healers crowding the market, but also criticized the recommendations of qualified doctors. Among the most popular preventative measures was flight from areas where the disease was rampant, which Boccaccio regarded as a safe opinion, but also remarked of disapprovingly: “[those] caring only about themselves […] abandoned their city […] and sought other places, going at least as far away as the Florentine countryside—as if the wrath of God could not pursue them with this pestilence wherever they went but would only strike those it found within the walls of the city.”² To Boccaccio and to others, such popular and qualified prescriptions were selfish and foolish because they seemed to

¹ Horrox, 109.
contradict divine will, both logically in attempting to flee God and morally in the abandonment of friends and family. However, physicians understood the epidemic and medical responses in a manner that did not highlight contrasts between divine and human agency in sickness and health, or between spiritual and human intentions, but defined the nature of divinely willed disease and divinely guided medicine as a spiritual partnership with physical results.

In our examination of how scholastic physicians both provided and religiously justified their preventative and curative measures against the Black Death, we will examine the plague authors’ explicit and implicit theological consciousness. First, referring to our knowledge of the gift and duty of medicine, we will explore how physicians conveyed a spiritual imperative in their obligation for the use of medicine according to God’s expectations. We will also reexamine scholastic interpretations of remedy as the result of God’s intervention through logically applied treatments, in which the logical principles and efficacy of treatment against the Plague depended upon His will and intervention through the properly applied procedure. From there, we will discuss behavioral and environmental measures of prevention, and the medicinal and surgical methods of treatment, that doctors employed, and how these measures were governed by God’s logic and, thus, God’s will. We will see that the effectiveness of these logical preventions and cures might have further indicated God’s expectations through their positive effects. We shall conclude that Plague physicians provided advice and treatment based on the belief medicine was a gift from God and the duty of the physician, and that its effective use came through the proper application of natural principles and ultimately according to the will of God. Furthermore, we will see how scholastic physicians could have justified medical responses to the divinely willed Black Death based on the belief that God’s will arrived through both of them.
The Divine Regulators

Medicine before and after the Black Death, as discussed in Chapter II, could be seen as a gift, an obligation, and a calculated art of divinely rational, natural principles and spiritual ends, and even during the first outbreak between 1348 and 1350, physicians observed spiritual ideals and imperatives in their treatment of the disease. As the masters of the Paris Medical Faculty extensively explained the Plague’s natural causes, they had also emphasized God as the highest cause of all causes. The doctors similarly stated that all should “return humbly to God,” while also providing extensive discussion of preventions and cures. Their most explicit rejection of a contrast between God’s will and medical action came with the explanation of their purpose as earthly remedy-providers: “this does not mean forsaking doctors. For the Most High created earthly medicine, and although God alone cures the sick, he does so through the medicine which in his generosity he provided.”

The Parisian masters emphasized the utility of medicine against the disease that they acknowledged to be God’s will. Furthermore, they did so by illustrating a significance of medicine mutually held between God and man, and at least beginning to explicate that there was no contradiction between Plague and doctors’ actions against it.

As the Paris compendium suggested a purpose for medicine, other Plague tractates were both implicit and explicit in the moral duty of those who advised and provided medical measures against the Black Death. The implicit declaration of moral duty came from the very composition of many of the tractates that were not by the command of authority, like that of the Paris faculty by the command of King Philip VI, but addressed to civic authorities and common people. The tractate of Jacme d’Agramunt was addressed to authorities of Lérida, but composed in Catalan.

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3 Ibid., 163.
4 Amundsen, 301-302.
(not academic Latin) and intended for the general public.\textsuperscript{5} Gentile da Foligno’s final consilium in particular, while addressed to the college of physicians of Perugia, is among the treatises most concise and bears a final section responding to particular questions. Both of these tracts, among others, clearly acknowledged the fact that some readers would not have access to physicians or the sometimes rare and expensive ingredients described, and listed alternative ingredients and procedures in such cases. Nonetheless, one of the most vocal declarations of moral duty in was that of the physician of Montpellier, whose treatise began by explaining that the grace of God compelled those who knew the cause of the epidemic to use that knowledge to cure the faithful.\textsuperscript{6}

We can see that medicine, perhaps most evidently, at the time of the Black Death demonstrated both a purpose and duty for physicians, and more broadly suggested their consciousness of and commitment to a more spiritual ideal through the God-given art of medicine.

Physicians did not perceive a contradiction between God’s will and medical response in medical thought, and plague doctors observed the limitations of their treatments, as well as the actual source of remedy. Guy de Chauliac’s views on the calculated nature of medical procedure were nonetheless paired with the belief that his practical efforts were divinely inspired, and his contemporary, John de Arderne, explained the actual cure of \textit{fistula in ano} as the intervention of the Holy Spirit facilitated by his operations. During the Black Death as well, God’s expectations for the use of medicine were further expanded in the belief that he worked through it according to the natural principles properly applied by the physician. Furthermore, a procedure built upon rational principles would not work unless the combination or application of these principles was according to God’s will. Jacme d’Agramunt agreed that the most certain circumstance of a cure was God’s permission, as he confessed, “if the corruption and putrefaction of the air has come

\textsuperscript{5} Campbell, 9.
\textsuperscript{6} Palazzotto, 45.
because of our sins, the remedies of the medical art are of little value, for only He who binds can unbind,” implying that if God’s wrath sought another response as a result of the Plague, the use of medicine would not bring the doctor’s desired end. In the end, plague physicians regardless of popular opinion could subscribe to a belief that medicine was a gift, duty, and complicated application of natural ingredients and operations intended to facilitate God’s will. Furthermore, through medicine, the physician and patient were both ideally conscious of God’s role in healing, and that each of them was supposed to grow spiritually after healing or being healed.

The final point regarding the medical perceptions of preventing and curing the Plague is based on the rational principles guiding them, and the manner in which these natural principles were closely related to religious ideals. As we read in Chapter II, Galenic health was related to the purity and balance of the body’s humors, and the physician was the regulator of the proper and natural equilibrium of the body that God had created according to reason. The pestilence, for the diversity of its universal and immediate causes, was most directly recognized according to rational medicine as the imbalance or corruption (which resulted in imbalance) of the humors, specifically the overabundance of the combined elemental qualities of heat and humidity or their respective fluids. The prevention and curing of the illness were thus guided by moderation and purification of the humors, as logically contrary to its physical causes, bearing or conducive to the contrary elemental qualities of coldness and dryness employed substances, often via activities characterized by these qualities or through the purging of the body of whatever overabundance it had which would cause or facilitate the pestilence. Nonetheless, these physical measures were also spiritual in the manner that proper avoidance and recovery relied upon the habits, behavior, and even thoughts of the patient, also governed by principles purity and moderation. Altogether,

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7 Aberth, 51.
8 Palazzotto, 114.
the medical responses to the Black Death will be examined not according to their contradictions to spiritual concerns, but for their very connections to and emphasis upon them.

Preventing the Sickness

Preventative measures for the Plague described the conditions and activities that were conducive to avoiding or lessening the effects of the disease, through behaviors and precautions that were logically contrary to the immediate effects of the corruption and in accord with ideals of purity, moderation, and piety. According to the Christianized principles of Galenic medicine, the health of the body was governed by rules similar to those of the soul. Behavior that was poor or destructive could logically yield negative health effects, as God had provided man with the natural components of proper lifestyle and the use of these natural substances in overabundance could compromise the balance of the humors. The main point of every measure was to remove the corruptive elements in the body and in the environment, and to maintain or restore the good elements in proper moderation. This demonstrated, according to the physicians’ logic, that the rational intentions of medicine were also divine intentions, and that God had provided for and expected man’s use of certain natural substances in certain quantities, avoiding the Black Death through rational means, but ultimately achieving spiritual ends.

The personal preventative measures best illustrate this focus of responses, and include recommendations on the subjects of diet, exercise, sleep, bathing, chastity, and emotion. In his long consilium, Foligno quoted Galen in stating that the greatest danger was “predisposition of the body [and that one was preserved] by diminishing the superfluidity, by purgation, by regimen of desiccation, and by moderately employing praiseworthy foods both in quantity and quality.”

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9 Ibid., 153.
10 Ibid., 140.
Physicians recognized the corruption and imbalance of the pestilence and prescribed preventative measures according to the natural condition of the body in order to reduce one’s disposition to the sickness, with logical opposites related to general concepts of purity and moderation.

High among these concerns was diet, that is, what to eat and how much, in order to assist the proper composition and balance of the humors, while simultaneously showing the connection between behavior and health. So-called dangerous foods generally corresponded to undesirable qualities of the susceptible body, and included what could be considered “humid” (or “wet”) or “corruptible” food and drink: most vegetables, certain fruits, poorly prepared meats, and non-flowing water.11 The recommendations on diet were, of course, founded upon logic: Jacme d’Agramunt warned against “birds that feed near stagnant waters,” Gentile da Foligno (on the authority of Averroës) advised against fish and in favor of “cold and dry” meats, and the Paris Medical Faculty suggested roasted (dry) rather than boiled (humid) meat, and others described meat that was easily digestible (which may be prepared for its laxative value).12 The logic of diet is best exemplified in the fact that records did not cite the prevalence of poorly prepared or hung meats based on hygienic concerns, but on this logical concern regarding its exposure to corrupt air.13 Other prescribed foods were for the purposes of correcting the humors, either for their elemental or laxative qualities, such as acidulous fruits and vinegar, aromatic seasonings, fresh and sweet wines (“because wine that contains sweetness purifies and more easily and has great tendency to turn into bile”), certain plants “traditionally used against poisonous corruptions of the humors” (rue, hyssop, scabiosa), and any combination of them was considered conducive to one’s humoral balance, either for the purposes of restoring some of these fluids and facilitating

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11 Aberth, 46; Byrne, The Black Death, 161; Palazzotto, 119, 124, 126.
12 Aberth, 48, 53; Byrne, The Black Death, 160; Palazzotto, 119, 122-124.
13 Ibid., 119, 122-124.
the expulsion of others.\textsuperscript{14} The proper quality of one’s diet was a means of behavior that could prevent the pestilence and predisposition to it. God had made all things—and all foods—and the scholastic physician, by his knowledge of natural principles, recommended foods conducive to the preservation of the body. These foods were clear of corruptive influence, such as exposure to corruption or stagnation in the air and water, and further facilitated the expulsion of corruption and overabundance already in the body. The spiritual dimension of one’s diet in the prevention of sickness was evident in the fact that certain foods were logically healthy.

Quantity of food and drink also played a role in the preventative diet, according to similar ideas of moderation in one’s external behavior. Citing Galen, Gentile explained that in addition to the consumption of logically healthy foods, “it [was] necessary to conserve some hunger […] in order to have easy bowel movements.” Corruption and excess were both negative, and thus were overeating and overindulgence. Abstaining from food was a practice of logical moderation beneficial to the humors, but in the case of extreme under-eating, as John Hake and the Strasburg physicians stressed the dangers of both extremes. Likewise, the physicians who acknowledged positive use of wine warned against excessive drinking. As moderate diet was important because it logically impacted the internal balance of the body, these prescriptions against over-eating and under-eating further suggested again that there was a proper behavior.\textsuperscript{15}

Aside from the dangers of corruptive or excessive diet came advice regarding forms of physical behavior in the time of the Plague, which further demonstrated the connection between the natural principles of Galenic and the concept of a proper way of life. Every poor choice of behavior was poor because it resulted either in imbalance or the predisposition to imbalance, and then corruption. Many doctors advised against exercise, particularly for those not accustomed to

\textsuperscript{14} Aberth, 52; Palazzotto, 119, 122-124.
\textsuperscript{15} Ibid., 140-141, 134, 139.
it, because inhaling and exertion might cause, as Agramunt explains, “foul and poisoned [air] to be drawn to the heart.” Those less accustomed to exercise theoretically became more winded and more exposed to what was nonetheless dangerous. Like good food in proper portion, so was good air, but it was not necessarily in high supply, and the idea that people should recognize the environment in terms of physical behavior implied a caution toward higher concerns. However, exercise did have qualities of moderation, as Gentile stated, “one may promenade before eating, for by such activity the body acquires the heat necessary for digestion and prepares itself for the expulsion of other superfluidities,” and Peter Damouzy claimed that, environmental conditions permitting, those accustomed to exercise should not stop, because they would hinder strength, and the positive effects of digestion and nutrition. Sleep, the logical opposite of exercise, was important as well for the body’s defenses. Bathing was often considered dangerous because of hot water’s tendency to moisten the body and, according to the Paris Faculty, safer to avoid. Potential advantages of bathing likely derived from its role in preparation of bloodletting (direct purging of the sanguine humor), or when done simultaneously with one’s removal of perspiration (excess fluid) with a warm, linen cloth, as Córdoba suggested. Four of the tractates treat the subject of sex together with that of bathing, but relate the two activities on the basis that both, particularly together, might create superfluidity or “excessively open the pores,” thus creating greater exposure to the corruption. Even for every behavior conducive to health, there was a potential danger of excess that might lead to internal imbalance or exposure to the disease. Thus,

16 Aberth, 52; Byrne, *The Black Death*, 160.
17 Ibid., 160; Palazzotto, 140, 144.
18 Aberth, 53; Palazzotto, 145.
20 Palazzotto, 148, 150.
21 Ibid., 147.
every behavior was relatable not only to natural effects, but also to the more general concept of moderation that indicated a limit to which they should be practiced.

A final matter of regimen to which seven tractates gave some consideration is that of emotional health in their discussions of physical health, and while this connection dated back to pre-Hippocratic and was probably therapeutic, it also demonstrated an attempt to logically explain the spiritual components of sickness, which proper and balanced diet and activity could only provide with an applied degree of analogy. The Muslim physician Ibn Khātimah advised that the “best companion [was] the book of the sublime Lord” and that one should seek positive recreation, think good thoughts, and avoid sadness, “speaking ill of others,” and “disagreeable [emotions],” because “[sadness was] one of the principle reasons for this catastrophe.” While not a Christian perspective, Ibn Khātimah’s advice could easily apply to ideal Christian virtues of kindness and piety, and similar reflection on spiritual concerns because of the divinely willed epidemic. Jacme d’Agramunt devoted an entire section to the topic of emotions and their link to physical health, in which he warned against hopelessness, citing Genesis 30, and telling readers to avoid fear and imagination, “[f]or from imagination alone, can come any malady,” even to the “infant in the mother’s womb.” Gentile explained that anger overheated the body and therefore overthrew reason by boiling of the heart, and that sadness excessively cooled and dried the body, tightening and exhausting it, and therefore impeding the faculties of understanding, judgment, and memory. Gentile’s explanation perhaps more directly appealed to the rational qualities of this emotional theory to health, but each of the three physicians demonstrated some attempt to rationalize a connection between ill feelings and susceptibility to illness. Thus, not only was it

22 Ibid., 150.
23 Ibid., 152.
24 Aberth, 54.
25 Palazzotto, 152-153.
important to behave a certain way and to a certain degree, but also to feel a certain way and to a certain degree, as emotion and regimen were logically related to internal health.

In manner of personal regimen, purity and moderation were conducive to good health, because they were all logically related to internal balance, and proper habits and behavior had observable consequences health, according to natural philosophy. Such principles of moderation were nothing new to Aristotelian philosophy or Christianity, and distinctions between good and bad, and acknowledgement of responsibility, were definitely nothing new to Christian teaching. Furthermore, the perception of early witnesses like Byzantine Emperor John VI (Kantakuzenos) that the Plague was “something […] sent by God to restore chastity” might not have sounded totally irrational to the most rationally minded physician. He would have seen medicine as a positive and rational force for both health and hope, which would ultimately facilitate the proper attention to the health of the soul amidst pestilential conditions, through the patient’s behavioral awareness in relation to God’s logical effects upon natural health.

**Correcting the Corruption**

The next stage of measures that still might be considered preventative provided a means by which the already corrupt air might be corrected, and although the foundations of the advice are logical in their use and combination of ingredients, they are still emphatic of the principle of moderation. All but three treatises discussed artificial measures against putrid air or the causes of putrefaction in the air, and these measures generally included aromatic or acidic substances in the form of perfumes, or among the ingredients in fires and fumigations, in order to logically combat the foul smells, humidity, and stagnation of the pestilential environment with fragrant

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26 Ibid., 134.
27 Byrne, *The Black Death*, 151.
smells, dryness (dry heat), and moving air.\textsuperscript{28} As the Paris faculty explained it, the fire and burning of various ingredients “hampered the putrefaction of the air, and removed the stench of the air and the corruption [caused by] the stench.”\textsuperscript{29} The logic was clearly in the fact that the dry qualities of the fire were contrary to the overly humid corruption of the air.\textsuperscript{30} Although he specified several recipes for fumigation, Jacme d’Agramunt further explained that, “the fire alone can effectively rectify air putrid in its substance.”\textsuperscript{31} He recognized the limited availability of many of the ingredients for those of lesser means, and in this manner demonstrated both logic and charitable practicability for his readers. Above all, physicians made it clear that the means to rectify the dangerous corruption of the pestilential air were also provided by God with a logical purpose of combating pestilential air, and that he thus expected their use.

In addition to the extensive prescriptions of fire and fumigation, some tractates similarly recommended the use of natural substances that individuals might carry for similar purposes, but observe the limits of their use. Several treatises discuss such fragrant (counter-corruptive) items, like flowers, herbs, lemon, camphor, and poma or pomum ambrae.\textsuperscript{32} Pomum ambrae (apple of amber), a ball containing ambergris, had popular use dating back to Antiquity.\textsuperscript{33} Even in the measures to combat corruptive air, there were natural indications as to their moderation. In the specific case of pomum ambrae, Peter Damouzy and the anonymous \textit{Queritur primo quae sint}

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\item These three treatises are \textit{Utrum mortalitas, que fuit his annis, fit ab ultione divina propter iniquitates hominum vel a cursu quodam naturali} (Whether the Mortality That Has Occurred in These Years Is Because of Divine Wrath for the Iniquities of Man, or Because of Some Natural Cause), \textit{Wyder dy epidemic oder wider dy buse luft dez pestilencie heysst und behudet den lijf des menschen vor vineyne eyter, vor bossen bulen, drusen, unde apostemen (Against the Epidemic or Against the Bad Air of the Pestilence and Preserving the Life of Men before the Poisonous Matter, Bad Boils, Glands, and Imposthumes)}, Dionisius Secundus Colle’s tract, according to Palazzotto, 300, 165-166; Byrne, \textit{The Black Death}, 159; Palazzotto, 166, 171, 175.
\item Byrne, \textit{The Black Death}, 160.
\item Palazzotto, 175.
\item Aberth, 52.
\item Palazzotto, 185-188, 190.
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aequitidines nunc currentes (First It Is Asked What Are the Diseases Now Current) observed the dangers of its overuse, including headaches (when used with too much camphor), the preclusion of sleep, the inducing of a “congealing of semen,” and the acceleration of graying hair. Such effects on sleep and fluids would have logically borne some similarity to the negative effects of poor regimen, and the physicians might have concluded that overindulgence in sweet fragrances like pomum ambrae, likely an expensive commodity, was not conducive to personal health. This would have demonstrated a similar connection to proper and improper behavior according to the natural principles over which God ruled and through which He gave good health.

Avoiding the Pestilence

In addition to personal regimen, Plague physicians also acknowledged the environment and provided some discussion of isolation or flight as preventative measure, in a manner that was founded upon logic, but expressed with charitable concern. The Paris masters recommended flight from areas where the vapors were corrupt and to “choose a dwelling away from the wind channels that carry these vapors, as in humid houses, where air is stagnant.” The qualities that made food dangerous, such as corrupt and stagnant environment, were logically relevant to the discussion of the larger environment. Nonetheless, the Paris Masters wrote for royal command. The Strasburg doctors and others recognized the impracticability of flight for some, and for them advised “seclusion […] with the doors closed day and night, opened only with the morning when the air is pure and clear and dry wind blows,” and several tractates dealt with isolation alone. The tractates that acknowledged the contagious or infective (carried by the sick and dead, their

34 Palazzotto, 190.
35 Ibid., 158.
36 Byrne, The Black Death, 159.
37 As paraphrased by Palazzotto, 159; Aberth, 46.
possessions, and other objects) nature of the pestilence prescribed for the healthy some manner of avoiding them.\textsuperscript{38} The anonymous Montpellier physician referred to his belief in transmission by sight that “when a doctor, priest, or friend wants to visit an invalid he should persuade him to close his eyes and then blindfold him with a linen cloth.”\textsuperscript{39} In addition to preserving the body, doctors understood the varying dangers of the pestilential environment and further prescribed how one should maintain, take caution against, or abandon his surroundings according to the logical qualities of health and humoral corruption. Nonetheless, the intention behind such advice was charitably offered in good will to readers, if not with the accommodating consideration that flight from the community was not an accessible option for those of lesser means.

It is also important to note that measures of this type were taken on the communal level as well, not only contrasting Boccaccio’s observation that avoidance measures were inherently selfish, but emphasizing the larger charitable nature of medical advice in the time of the Black Death. As already mentioned, physicians like Jacme d’Agramunt and Gentile da Foligno wrote and likely worked directly with civic authorities establish rules for public safety.\textsuperscript{40} Even without explicit statements of medical advice in civic ordinances, we can observe within their actions and intentions the logic of scholastic medicine. As early as 1348, Catania, Gloucester, and Venice began isolating themselves from other communities and points of trade, and Venice specifically appointed noblemen to form a sanitary council authorizing the isolation of infected ships, people, and goods on an island in the lagoon.\textsuperscript{41} One of our most extensive examples of civic responses to the Plague are the ordinances of Pistoia, which, even after a second revision on June 4, 1348, took unprecedented steps against the sources and spread of pestilential infection. Among other

\textsuperscript{38} Palazzotto, 161.  
\textsuperscript{39} Horrox, 185.  
\textsuperscript{40} Aberth, 50.  
\textsuperscript{41} Palazzotto, 157, 171.
things, they banned the transportation of clothing and placed rules on butchering, handling, and sale of meat and banned its hanging (exposure to the air). Both of these bear a clear relationship to the immediate causes of infection and prohibitions of corruptible meats that we have already discussed. The ordinances also devoted extensive attention to the danger of corpses, regardless of the causes of death, and this likely related to the general dangers of stagnation and putridity, which could have invited the pestilence as well as carried it. As a result, Pistoia dictated that civic authorities had to be notified of deaths, corpses had to be enclosed in wooden coffins and buried at specified depths (of two and a half arms-length), and corpses could not be brought into the city. They even placed limitations on funeral attendance and all public gatherings, due to the likely fear that large groups increased risk of the spread of infection.42

Altogether, the preventative measures against the Black Death were guided by the logic of nature and health, but this logic was not limited to a mathematical dimension but guided by its own deeper, spiritual significance. Just as the most manual surgical procedures before and after the Black Death could have been acknowledged as the facilitation of divine will, the application of logical opposites to pestilential conditions was arguably grounded in the idea that God had provided the cure. The fact that many of the preventative measures were personal and behavioral implied that the rational principles guiding physiology were reflective properties of proper living according to divine ideals. Emotional reflections upon hope, goodness, and God were among the measures most vividly associated with spiritual principles, but yet reflective of the relationship between behavior and physiological consequences. Furthermore, according to the physician, advising the perceivably selfish measures of flight and seclusion were charitable and arguably aimed in helping good Christians to live to see another day. There were religious justifications

42 Horrox, 194-200.
for the practices of preventative health, both in their causes and effects, with which the physician could easily perceive his role as the regulator of mortal health for higher, spiritual ends.

Treating the Plague

The few curative measures prescribed, many of which served as preventative measures as well, adhered to the same principles of the purity and balance of the humors, through which God through nature facilitated health, after physicians purged the body of corruption and excess with natural remedies or surgical applications and operations. The two types of recipes, simples (bol armeniac and terra sigillata) and compounds (theriac or molasses and mithradate), were age-old medicines, but they were also prescribed in small doses for the logical purposes increasing one’s resistance to poison or to expelling poison already in the system. Our discussion of definitions of poison from the previous chapter illustrates in the context of curative substances the nature of good and evil in man’s interaction with nature, and the idea that the physician should understand and, above all, utilize for good purposes the ingredients that God had provided.

One such substance was a compound remedy called a theriac, which was essentially the same concept as an antivenin, utilizing the same substance or contra-natural qualities of a certain substance in order to fight a related illness. Gentile da Foligno had praised both the poisons and the antidotes that God had provided, because antidotes, just like the artificial cause of the Plague found in the tractate of Alfonso de Córdoba, were composed of natural ingredients. The theriac, or treacle, was the most valued medicine of its time, and despite its wide variety of recipes, the common ingredient was always mashed snake’s flesh. In his spiritually emphatic Livre de seyntz medicines (Book of the Holy Doctors), Henry of Grossmont, duke of Lancaster, later wrote that,

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43 Palazzotto, 195-196.
“the treacle is made of poison so that it can destroy other poisons.” His assertion was based on the fact that the concoction made with the flesh of the snake was primarily used in the treatment of snakebites. Gentile’s Consilium Regarding a Snake Bite observed and praised both poisons and their cures because God had provided them, and because with the proper rational application, one of God’s logical substances could be used to provide the necessary remedy against the other. Aside from its rarity, as eleven of the tractates listed more attainable and inexpensive alternatives to the theriac, such as the scabiosa, lozenges, leeks, holy water, and scallions, and inconclusive evidence of success, the theriac demonstrated in theory the powerful idea that nature ultimately had a positive purpose. Where there was poison, there was an antidote, and God provided the poison and illness so that they could be cured with the other natural substances He had provided, demonstrating the logical nature and purpose of medicine because of His role in it.

More intense methods of removing corruption, equally valid as preventative measures, were the use of cathartics or purgatives in the form of pills, powders, potions, electuaries or via pastes, enemas, messages, and bloodletting, which facilitated the balance of the body and health according to God’s logical intentions. Unlike the antidotes such as theriac, these substances were not necessarily employed against the corruption or poison, but the imbalance that could invite it or result from it. A major emphasis was on maintaining bowel movements, with the use of various natural recipes, but it was usually in conjunction with phlebotomy (bloodletting), a procedure both common and ancient which was intended at reduce the superfluidity specifically in the sanguine humor (blood). Both of these popular and time-tested procedures were founded

45 Aberth, 49; Byrne, The Black Death, 160; Cantor, 174; Palazzotto, 201.
46 Ibid., 206.
47 Ibid., 206.
48 Ibid., 215-216.
upon the principles of natural balance, but they could also be used excessively, and to a point at which they were contradictory to their intention. In his treatise, the Muslim doctor Ibn Khātimah provided recipes to suppress vomiting and violent diarrhea, because he recognized that too many bowel movements could weaken the patient and make him more susceptible to illness.\(^49\) The same went for bloodletting, which was to not be used if the patient was extremely ill, according to Ibn Khātimah.\(^50\) Dionisius Secundus Colle warned that the patient should be of an adult age.\(^51\) These methods were potentially beneficial to balance and the healthy condition of the body that resulted, but they could also be detrimental and in favor of the disease. The curative measures against the Black Death in general demonstrated that the physician, as well as the individual, had to be mindful of moderation through which God’s natural principles gave remedy.

Surgery in the Black Death involved a direct extraction of the poison and excesses that brought and characterized the illness, demonstrating the most human means by which physicians facilitated the natural circumstances of God’s intervention. Fifteen years later after the outbreak, Guy de Chauliac cited Galen and Hippocrates in identifying the “apothems” (buboes) as external results of an internal corruption, in order to justify the methods by which the internal corruption could be drawn out.\(^52\) Thus most methods at the time of the first outbreak involved applications of poultices, plasters, lotions, and salves on infected areas, based on belief that health could be restored by the evacuation of poisonous material from the body.\(^53\) Others dealt with soothing and pain-killing substances, and astringents to draw the poison specifically out of the buboes.\(^54\) Physicians also used bloodletting measures to draw poison away from the infected organs by

\(^{49}\) Ibid., 214-15.  
\(^{50}\) Ibid., 220.  
\(^{51}\) Byrne, *The Black Death*, 58.  
\(^{52}\) Chauliac, 247.  
\(^{53}\) Palazzotto, 222-223.  
\(^{54}\) Ibid., 228-229.
bleeding from the vein nearest the bubo and away from the heart, and recommended the use of cupping glass, to attract, isolate, and remove the poison from the body.\textsuperscript{55} The ultimate intention of surgical procedure was that the bubo would eventually, if not more rapidly, ripen and rupture, and permit the cleansing of the wound, for which Gentile da Foligno prescribed the placement of leaves of basil within the wound.\textsuperscript{56} In addition to evacuating the negative elements of the Plague present in the body, Gentile added positive elements to facilitate the healing process, expanding upon the idea that certain logical conditions would prompt the occurrence of a remedy. Surgery against the Black Death, like all other natural treatments, was a means of setting the stage for the natural effects, through which God worked, would bring a restoration of bodily health.

**Conclusion**

In the context of the Black Death, scholastic physicians provided advice, preventative measures, and treatment in a manner and in terms that God dictated and expected. A physician’s theoretical role was as the preserver of the body who restored and maintained the natural balance that God had created, through to the natural principles that He provided and through which He provided the actual remedy. Even in the absence of explicit expressions of a spiritual dimension to their work, Plague doctors demonstrated an imperative to provide information and treatment to authorities, communities, and patients, demonstrating charity through their profession, if not a greater commitment to the belief that medicine was a divine gift and expectation. Furthermore, the preventions and cures found in the tractates were understood within, if not derived from, a larger paradigm of the causes and effects of natural substances and behaviors in relation to the purity and balance of the four humors, the guiding indication of health. It was through their

\textsuperscript{55} Ibid., 219-220.  
\textsuperscript{56} Ibid., 231.
work and the understanding of their work that physicians could acknowledge the role and even the expectations of God through the logical contexts of natural properties of substances and their causes and effects upon the human body, as well as through the very efficacy of more involved procedures like surgical extraction of the internal corruption of the Plague.

Furthermore, even the most practical advice and operations against the Black Death held a spiritual dimension. Prescribing a regimen for a balanced the body through diet and behavior, according to God’s blueprint, was further governed by the belief that certain habits and activities were conducive to humoral balance and, thus, good health. Poor choice and excess of specific types of behavior yielded observable consequences and closely related to spiritual ideas of purity and moderation. Spiritual advice further demonstrated the relationship between behavior and health, and suggested that noble and pious activities, feelings, and thoughts were ideal habits for the healthy and faithful. Above all, the physician observed the role of God in medicine, as the agent within the philosophical principles upon which medicine was founded, and he also further demonstrated an awareness of God’s agency in the application of these principles from which the anticipated cure resulted according to God’s rational will. Furthermore, even with the protection from and healing of the Plague came the behavioral modifications and treatments in which both the patient and physician might observe God’s own action.
Chapter V
A Conclusion

As we began in Chapter I, our use of the term “secular” medicine referred only to the fact that physicians were scholars of natural philosophy, and we saw that they deeply recognized the divine in every other manner. God was inherently present in all of the logic of nature and in all logic, and, even in the practical approaches of natural medicine and amidst the Black Death this was the case. The lack of explicit mentions of the divine in its arrival and the methodical, hands-on approach to its prevention and cure did not preclude His agency. In plague tractates centuries later, after the Reformation, physicians would explicitly cite the cause of divine punishment in a manner that seemed to distinguish it from the mechanical forces of nature.¹ In scholastic medical thought, God and natural forces were inseparable, and His role was evident not only in the fact that natural law was observable, but in the very fact that it natural law existed.

In Chapter II, we saw that medicine leading up to the time of the Black Death was a vast academic profession that inherently recognized the logic of all nature, and the divine nature of all logic. Pagan philosophy regarding the body and the cosmos provided the means by which the learned physician could and should strive to understand God’s creation. This pursuit was not only subservient to the concerns and demands of the eternal soul, but also divinely intended to bring greater awareness of God and the virtuous life, in good health. Aristotle, Galen, and other non-Christians may have developed the framework, and the cure may have resulted from the human application of logical principles, but God was the true author of natural law and the true

¹ This is my yet unexamined speculation that some shift in the relationship between science and organized religion, perhaps the beginning shift away from scholasticism, following the Reformation might have prompted a distinction between the direct wrath of God and less astounding natural occurrences. For those wishing to explore or refute this possibility, I have observed the statistics in Fabbri, 184-186.
agent of healing. The intellectual and practical perspectives from which physicians wrote at the time of the Black Death would derive from the solid foundations of scholastic medicine, which was a secular science, but was, like all sciences, based on divine principles.

In Chapter III, we examined the philosophical foundations of scholastic physicians in the observations of the causes of the Black Death, and observed that physicians explained the Plague in a variety of causes and causal chains for which the ultimate cause was God. From the theories of first cause that Aristotle established and Avicenna and others interpreted, the physicians of the first outbreak traced divine agency through the stars, weather, earthquakes, and chemicals around the body, and within the internal corruptions and imbalances that signified illness. Scholastic diagnosis explored the variety of means by which God could convey His will through nature, and demonstrated how divine agency could also be observably physical and logical as the authors of the plague tractates demonstrated their natural and theological consciousness as one.

In Chapter IV, we explored the theological significance of the properties and processes of scholastic medicine in the prevention and treatment of the Black Death, and saw that physicians responded to the disease with prophylactics and practical treatments, with the belief that God, in both natural principles and efficacy of application, provided the cure. As physicians observed the circumstances of the disease and predisposition to the disease, they advised behaviors and procedures that would oppose it. As physicians observed the contra-natural causes and effects of the disease, they prescribed and utilized substances and surgeries that would correct its internal and external damages to the body. Beside their beliefs in the imperative charity of healing, for which many explicitly wrote on the disease, physicians demonstrated the divine indications of logical measures against the divinely willed disease: God established the useful and logical qualities of these measures, permitted their efficacy, and, thus, intended and created the effects
that resulted in protection and cure. In the efficacy of preventative measures were the principles and behaviors conducive to life, and in these and curative treatments were God’s will.

Here, in Chapter V, we conclude that doctors at the time of the Black Death subscribed to a logical philosophical foundation for the purposes of explaining nature and healing the body, and that this secular science acknowledged the role of God in both cause and cure and further demonstrated an inherent consciousness of the divine in their explanations of and response to the first outbreak. Man learned, explained, and practiced medicine, but God created, governed, and intended it. As medicine in the time of the Black Death demonstrates, man could apply rational explanations to divine cause and practice natural medicine according to divine will. In the end, we have seen that scholastic physicians observed the role of the divine in the most natural and practical explanations and treatments that they provided in response to the Black Death. Amidst the calls to God and fervent and renewed piety, the physician was the humble servant to divine will through the logic of his natural principles in health, illness, and medicine.

Papal Support (An Epilogue)

Our observations regarding the complexities of medical explanations and responses to the Black Death, and the philosophical foundations and interpretations with which we might ascribe to its “sacred” nature, have come primarily from the words of physicians. Non-physicians might have similarly valued scholastic medicine as a knowledgeable and calculated art, and they might have even more profoundly recognized its connection to piety and theological consciousness. At the time of the first outbreak, Pope Clement VI himself demonstrated how even the highest of ecclesiastical authorities might have recognized the natural, logical, and active approaches of medicine in association with the absolute teachings of the Christian God.
One man—nor even the pope—could ever articulate the position of all Catholic authority on the use of medicine against what was considered to be a divinely willed epidemic. However, Pope Clement VI and his relationship with physicians suggest that at least one supreme pontiff endorsed the “sacred” nature of medicine. He might have famously chastised theologians at the University of Paris for ignoring biblical study in favor of philosophical discussion in 1346, but in 1348 he commanded medical professionals in the city of Avignon, kept his own personal staff of physicians on hand, as many popes did, and may have depended upon them for survival.\(^2\) With earlier intellectual traditions and practical prohibitions in place, Clement VI endorsed the role of physicians as agents against the Black Death through natural means.

Much like the physicians who sought, and wrote extensively on, the observable causes of the pestilence, Clement VI, who seemed certain of God’s divine wrath, also called for a natural investigation. An unknown Flemish cleric and chronicler (copying, to an uncertain extent, from a letter sent from the papal court at Avignon by musician Luis Heyligen Sanctus) claimed that, “[a]natomical examinations, in which many corpses were opened, were carried out in many Italian cities, and also, on the pope’s orders, in Avignon, to discover the origins of this disease.”\(^3\) This most obviously helps to dispel the myth that the Church had stood in the way of anatomical observation via dissection. Guy de Chauliac, the pope’s own surgeon-physician, and Gentile da Foligno, as well as others, particularly in southern universities like Bologna, openly admitted to having witnessed, conducted, and even produced textbooks on dissections during their medical studies.\(^4\) Some Italian and southern French universities actually required students to at least


\(^3\) Horrox, 42.

witness a dissection at some point. Among other cases, it has often been the 1299 bull of Pope Boniface VIII forbidding, under pain of excommunication, the Crusades-era funerary practice that involved taking apart the corpse and boiling the flesh off the bones for transport purposes. The prohibition was actually the work of those anatomists, particularly of northern Europe, who interpreted this as a complete forbiddance of dissection. What this most importantly illustrated was not the pope’s lack of hostility to the most manual measures of fourteenth-century medicine, but his permission to use it in the case of the Black Death. Although Clement VI had declared divine wrath as the cause of the Plague, he also called upon medical professionals to explain its more immediate, observable causes. Perhaps he acknowledged, as physicians did, that God was ultimately the cause, but that a natural and observable cause or causes could be discovered and interpreted through the Church’s accepted use of man’s medical knowledge.

Ever more ascertainable is the fact that the pope sought the natural explanations of the physicians for practical purposes, to combat the divinely willed, but naturally understandable, epidemic. Guy de Chauliac attests to his selfless determination, and that of other physicians, to remain at Avignon rather than to flee at a time when the faithful needed their help, during which time he actually contracted but survived the disease. However, recent evidence suggests that Guy and others were actually required, by papal command, to remain and tend to the sick and dying. As we have discussed public safety regulations, the pope’s own measures in enlisting doctors for the community of Avignon would have been nothing unusual, but it would have certainly implied his validation of their social role as practical healers in accordance with the theological intentions of medicine, even against the Plague. If this had indeed been the case, we

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5 Numbers, 47.
6 Chauliac, 249-250.
see that Pope Clement VI not only sought medical answers, but solutions, as did many others, and further suggested medicine’s Christian value, even against God’s disease.

The most telling and indeed best recorded interaction that Pope Clement VI had with the practical treatment of physicians was not on the communal level, however, but personal, and this was before, during, and after the first outbreak. Petrarch’s *Invectives* and a 1709 examination of the pope’s body revealed that Clement VI had not only employed personal physicians, but that he required their consistent attention, and underwent an a surgical procedure called a trepanning, in which a hole was drilled in the skull in order to relieve fluid pressure around his brain. Guy de Chauliac was familiar with the procedure, as he included it within his surgeon’s guidebook, and although he did not mention Clement VI as a patient, Petrarch and others were clearly aware of it. Nonetheless, it was a procedure that Pope Clement VI might not have lived to undergo at some point in 1352 had he not survived the Black Death in the preceding years.

During the first outbreak, the personal preventative measures described in the previous chapter were also nothing alien to Pope Clement VI, and his use of them might have more deeply suggested the Christian validity of medicine. One of the most prominent measures, “[keeping] the air pure with fires in the hearth,” may be found in Guy de Chauliac’s section pertaining to the Plague, the period during which he was located at Avignon. We can infer from these facts that Pope Clement’s own survival of the first outbreak came with the help of his doctors, and that he spent much of the time seated between roaring fires in the papal chambers. We know that the use of fire and fumigation were both natural, preventative measures, prescribed by the physicians according to the belief that elemental qualities of heat would counter the negative qualities of the

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8 Chauliac, 250.
9 Kelly, 159.
naturally corrupted air. We recall that doctors might have justified the measure as rational and theologically reconcilable, a pursuit for healthy, natural balance through divinely logical means and according to divine will. Furthermore, this was a reasoning both founded upon Christianized natural philosophy and operating within the limits of ecclesiastical law. We may understand that for the pope, as for the physician, the divine nature of medical logic was valid.

In the transcript of a mass that Pope Clement VI wrote during the Black Death, entitled *Recordare Domini (Remember the Lord)*, the text claims that, “all those hearing the […] mass should hold a burning candle while [hearing] mass on the five following days and keep it in their hand throughout the entire mass, while kneeling; and sudden death shall not be able to harm them,” as it was “certain and proved in Avignon and neighbouring regions.”¹⁰ This statement implied the protective power of candles at least, depending upon the reading, during the mass, as long as they were held. While this claim to the faithful might have been insignificant in all but the directly intended spiritual context, it might also be a testament to the Christian reconciliation of medical logic. We have discussed fire in the manner of the doctors who explained its natural properties against the contrary elements of the Plague, but also acknowledged God’s presence and intention in all natural things. If a physician of secular sciences, could recognize God’s role in the most natural human observations and most manual human operations, perhaps the pope could recognize this use of fire because of its inherent contrast to the pestilence, as a natural manifestation of God’s good will and divine mercy for the sick and faithful.

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¹⁰ Horrox, 122.
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