

IV

MEDIEVAL MUSLIM INTERPRETATIONS OF PLAGUE

A. MEDICAL INTERPRETATIONS

1. Etiology

When confronted by the Black Death, Muslims generally ascribed its ultimate cause to the will of God. The manner by which God caused it to occur among men, however, was the subject of innumerable and often contradictory explanations.¹ The majority of the Muslim legal scholars who wrote plague treatises were more interested in the theological explanation of the disease than in the physical causation; the latter was of greater concern to the physicians, although the physicians were not free from definite religious strictures in their medical interpretations. Apart from the medical tracts of the physicians, various naturalistic interpretations are usually found randomly lumped together with religious explanations, differing only in degrees of emphasis according to an individual author's point of view. What has been said about the fourteenth-century European plague treatises is true for the Middle Eastern treatises:

¹ There is no satisfactory modern study of Arabic medical history during the medieval period. For a general introduction and bibliography, see F. M. Pareja, *Islamologie* (Beirut, 1964), pp. 993-1002, 1014-1016; for Persia, see Elgood, *A Medical History of Persia*. Ullmann's recent work, *Die Medizin im Islam*, is largely a bibliographical study of Arabic translations of Greek works and Arabic medical compendia. See also the older bibliographical study of Arabic medical works for the fourteenth and fifteenth centuries in L. Leclerc, *Histoire de médecine Arabe* (Paris, 1876), vol. 2, pp. 261-301, and the survey of the subject that is still very useful: E. G. Browne, *Arabian Medicine* (Cambridge, 1921).

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Men's minds seem to have been unusually open to entertain any and every hypothesis concerning the origin of the great calamity, and often in the plague treatises of the period a variety of causes were accepted as being simultaneously and successively in operation.²

Out of this confusion arising from ignorance, the predominant etiological view of the Middle Ages that emerges, in both the Orient and the Occident, was that the disease was produced and spread by corruption of the air, or miasma.³ This miasma was believed to damage men and animals, waters and plants. The miasmatic hypothesis was paramount in Europe and the Middle East because it could readily be integrated and supported by accepted theological beliefs and classical medical texts.

The Arabic writers at the time of the Black Death adopted this miasmatic theory of epidemics primarily from Hippocrates and Galen, either directly or indirectly through the commentaries of Muslim doctors, especially Ibn Sīnā (Avicenna: 370-428/980-1037).⁴ The study of Hippocrates and Galen was the mainstay of medical education in the medieval period.⁵ For example, the works of these classical authors are known to have been conspicuous in the libraries of Jewish physicians in Fustāṭ during the twelfth and thirteenth centuries. "Studying medicine meant in the first place memorizing selected writings of Hippocrates and even more of Galen."⁶

The miasmatic theory is found in Hippocrates' *Epidemics I and III*⁷ and in Galen's commentary on the *Epidemics* in his

² Hirst, p. 25.

³ Campbell, pp. 36-37, 48-56. The earliest Arab medical statement of this theory derived from Hippocrates may be found in 'Alī ibn Rabban aṭ-Ṭabarī, *Firdausu l-Hikmat*, p. 330.

⁴ EI²: "Ibn Sīnā" (A.-M. Goichon); see also Tholozon, *Histoire de la peste bubonique en Perse*, p. 5.

⁵ GAS, vol. 3, pp. 23-47, 88-140; see also F. Rosenthal, *Four Essays on Art and Literature in Islam* (Leiden, 1971), p. 3.

⁶ Goitein, *A Mediterranean Society*, vol. 2, p. 249.

⁷ *Hippocrates*, trans. by W.H.S. Jones (New York, 1923), vol. 1, pp. 139-211. The Arab adoption of the Hippocratic theory of epidemics

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De differentiis februm (Book I, Chapter VI).⁸ In his commentary, Galen develops Hippocrates' idea of miasmatic corruption of the air and incorporates the idea of an energizing spirit or *pneuma*, which is absorbed by the body from the atmosphere and is radiated to all the vital organs. This was part of Galen's theory of humors that dominated medieval medicine and formed the framework for most of the medical accounts of the Black Death.⁹

The humoral theory not only was wrong but subverted clinical observation. The theory presupposes that the world is composed of four elements: fire, air, water, and earth. Each of the elements is linked with one of the four principal body fluids, and each of the fluids thereby assumes certain qualities of the elements. Thus, since fire is hot and dry, and since fire is linked with yellow bile (choler), yellow bile is hot and dry. Air is associated with blood, and blood is therefore hot and moist; water is the element of phlegm, the humor which is moist and cold; and earth is the element of the melancholic humor, black bile, which is cold and dry. Moreover, each humor is associated with a color, a taste, an age, a season of the year, and a temperament.

is interestingly demonstrated by the important (lost) Berlin MS no. 6380 (Ahlwardt), which contained eleven Arabic treatises on plague. The last ten treatises may be dated from the time of the Black Death; the first was an Arabic translation of Hippocrates' *Epidemics*: "al-Abīdhīmīan [ἐπιδημιον] al-amrād al-wāfidah" (see Appendix 3).

⁸ *Medicorum*, vol. 7, pp. 287-294; see also vol. 19, p. 391. It should be borne in mind that almost the entire Galenic corpus was translated into Arabic and reached the West through Latin and Hebrew translations from Arabic. For plague specifically, see the selection from Galen's work on plague and its symptoms: *Jawāmi' kitāb Jālinūs fi l-dubūl wa dalā'ilhu*, MS no. A84, no. 3, The National Library of Medicine (D. M. Schullian and F. E. Sommer, *A Catalogue of Incunabula and Manuscripts in the Army Medical Library*, New York, 1950, p. 325; *GAL*, vol. 1, p. 217).

⁹ For a thorough modern exposition of Galen's humoral theory, see R. E. Siegel, *Galen's System of Physiology and Medicine* (Basel, 1968), pp. 196-359.

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The corruption of the air is a disturbance of the healthy balance of the four elements that, in turn, upsets the proper balance of the four corresponding bodily humors. For example, Ibn Ḥajar describes an epidemic as the corruption of the essence of the air, which is a substance and nutrient of the soul.¹⁰ Ibn al-Khaṭīb explains that the putrid air changes men's humors so that fever and blood-spitting ensue.¹¹ The prophylaxes against plague recommended by Ibn Sīnā and others were directed precisely to righting these imbalances in one's surroundings and in one's body, and many remedies naturally go back to Galen.

The influence of Galen's *De differentiis februm* on Islamic medicine can be traced directly to the work's early translation into Arabic by Quṣṭā ibn Lūqā al-Ba'labakkī (d. ca. 300/912),¹² who was also the author of two early works on infection and epidemics.¹³ Ibn Sīnā's explanation of epidemics in his important medical manual, the *Qānūn fī ṭ-ṭibb*, is based primarily on Galen's work. In addition, the description by Ibn Sīnā of plague in various parts of the *Qānūn*¹⁴ seems to show that he was familiar with the disease or had access to well-informed medical sources.¹⁵ For he was able accurately to relate the plague symptoms in Arabic to their Greek terminology and to give the relevant medical treatment and remedies. From all indications, the influence of Ibn Sīnā's interpretation of plague was enormous in the Middle East, as well as in Europe. The *Qānūn* governed European medicine for several

¹⁰ *Badhl*, fol. 13a; the author quotes Ibn Kathīr's *al-Bidāyah* that the epidemic corrupts the air consequently the humors (*Badhl*, fols. 11a-12a). He also cites al-Ghazzalī's *al-Iḥyā'* that the corrupt air does no harm when it meets the outside of the body, but the illness depends on the duration of its inhalation (*Badhl*, fol. 98a).

¹¹ *Muqni'at*, fol. 39b.

¹² *GAL, Supplement*, vol. 1, p. 366; see also Seidel, "Die Lehre von der Kontagion bei den Arabern," p. 85.

¹³ *Kitāb fī l-ī'dā'* ("On Infection") and *Kitāb fī l-wabā' wa asbābihi* ("On the Epidemic and Its Causes").

¹⁴ *al-Qānūn fī ṭ-ṭibb* (Cairo, 1877), vol. 3, pp. 64-66, 121-122. Cf. Campbell, p. 77, n. 43 is clearly erroneous concerning Ibn Sīnā.

¹⁵ Sticker, *Abhandlungen*, vol. 2, p. 37.

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centuries after its translation by Gerard of Sabloneta in the thirteenth century. It has been recently stated, in a rather curious manner, that in the *Qānūn* of Ibn Sīnā “are to be found most of the germs of European medieval thought in regard to epidemiology.”¹⁶

Ibn Khātimah, in his lengthy discussion of the corruption of the air, conveniently distinguishes for us the three remote causes of plague miasma frequently encountered in the medieval accounts: (1) the irregularity of the seasons, either in temperature, rains, or winds; (2) the putrid fumes arising from decaying matter on the earth; and (3) astrological events. The first explanation is considered by the author to be the most probable one for the pandemic. Ibn Khātimah drew this theory of natural causation of the disturbance of the four natural elements from Hippocrates.¹⁷

Evidence of these three beliefs, as well as an illustration of Ibn Sīnā’s preponderant influence on later Arabic medicine, is apparent in the following quotation from Ibn Ḥajar’s plague treatise. The Egyptian physician Ibn an-Nafīs, who wrote an important commentary (*Mūjaz al-qānūn*) on Ibn Sīnā’s *al-Qānūn*,¹⁸ is cited for his discussion of the causes of the plague miasma:

The pestilence resulted from a corruption occurring in the substance of the air due to heavenly and terrestrial causes. In the earth the causes are brackish water and the many cadavers found in places of battle when the dead are not buried, and land which is water-logged and stagnant from

¹⁶ C.E.A. Winslow, *The Conquest of Epidemic Diseases* (Princeton, 1943), p. 95. For example, the important plague treatise of Gentile of Foligno (*Consilia contra pestilentiam*, A.D. 1348) draws explicitly upon Arabic sources. Besides those of Ibn Sīnā, he utilized the works of ‘Alī ibn ‘Abbās al-Majūsī (Haly Abbas) and Abū Marwān Zuhr (Avenzoar). See Campbell, p. 60.

¹⁷ *Tahṣīl*, fols. 52a-56b. Ibn al-Khaṭīb denied the essential change in the nature of the air but was correct in interpreting the air as the vehicle for plague infection (*Muqni‘at*, fol. 39b).

¹⁸ *al-Qānūn*, vol. 3, pp. 64-65 (translated in Seidel, “Die Lehre von der Kontagion bei den Arabern,” pp. 87-88): “Faṣl fī ḥummayāt al-wabā’ wamā yujānisuhā wa-hiya ḥummā l-judārī wal-ḥaṣbah.”

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rotteness, vermin, and frogs. As regards the heavenly air, the causes are the many shooting stars and meteorites at the end of the summer and in the autumn, the strong south and east winds in December and January, and when the signs of rain increase in the winter but it does not rain.¹⁹

Turning to Ibn Sīnā's original discussion of plague in the *Qānūn*, from which Ibn an-Nafīs and Ibn Khātimah drew their information, we find that Ibn Sīnā mentions as a sure sign of an approaching plague epidemic that rats and subterranean animals flee to the surface of the earth, behave as if they were intoxicated, and die.²⁰ Although this is an exact description of the effects of a plague epizootic, it was believed at that time that animals perceived the evil miasma before men; as *only* a forewarning of disease, creatures such as rats were observed to flee from the contaminated soil. In no case, either in the East or in the West, was the causal relationship between rats and plague recognized during the medieval period.²¹

¹⁹ *Badhl*, fols. 13b-14a. The passage is frequently quoted by the Muslim authors in their treatises: *Kitāb t-tibb*, fol. 144b; Ibn Abī Sharīf al-Kāmilī, *Kitāb fī ahkām at-tā'ūn*, Dār al-Kutub al-Miṣrīyah no. 102 *majāmi' m*, fols. 157a-157b.

²⁰ *al-Qānūn*, vol. 3, pp. 66 (quoted in *Badhl*, fol. 14a *et passim*). While Ibn Sīnā derived a large portion of his etiology of epidemics from Galen, as mentioned above, there is no observation by Galen of the behavior of rats, which are the essential vehicles of flea transmission. The question naturally arises: What was the source of this important observation? To repeat, there is no evidence that this phenomenon was derived by Ibn Sīnā from Galen (see Heinrich G. Schmitt, *Die Pest des Galenos*, diss., Medical Faculty, Würzburg, 1936). Therefore, the observation of the rats' behavior may have been taken from earlier Arabic medical commentaries on Galen, from non-medical writers, such as al-Jāhīz, or was a genuine personal observation of Ibn Sīnā himself. From a different point of view, Major Greenwood maintains that Ibn Sīnā was merely applying the miasmatic theory to rodents since the miasma was believed to arise from the earth, and that he was, consequently, not recording an empirical fact (*Epidemics and Crowd-Diseases*, p. 295).

²¹ See Otto Neustatter, "Mice in Plague Pictures," *The Journal of the Walters Art Gallery*, vol. 4 (1941), pp. 105-114.

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On the basis of the idea of the terrestrial corruption of the air as expressed by these Arabic medical works, Ibn Khaldūn asserts that pestilences resulted from famines and the corruption of the air produced by over-population, according to his original theory of the dissolution of human society. Ibn Khaldūn writes:

In the later [years] of dynasties, famines and pestilences become numerous. . . . The large number of pestilences has its reason in the large number of famines just mentioned. Or, it has its reason in the many disturbances that result from the disintegration of the dynasty. There is much unrest and bloodshed, and plagues occur. The principal reason for the latter is the corruption of the air [climate] through [too] large a civilization [population]. It results from the putrefaction and the many evil moistures with which [the air] has contact [in a dense civilization]. Now, air nourishes the animal spirit and is constantly with it. When it is corrupted, corruption affects the temper of [the spirit]. If the corruption is strong, the lung is afflicted with disease. This results in epidemics, which affect the lungs in particular.²²

Because of Ibn Khaldūn's exposure to the Black Death in Tunis, it is very likely that he is referring specifically in the last two sentences to pneumonic plague. In any case, he observes the significant role of famines that have frequently preceded plague epidemics in the Middle East and North Africa. As for the underlying conception of the air and its corruption, certain classical ideas of epidemics, which we have already discussed, are clearly recognizable.

The cause of the poisonous miasma was also sought in unusual heavenly phenomena that preceded an epidemic. A remote cause of the great pestilences was considered to be the unfavorable conjunction of the major planets. The Arabs had previously developed the theory that the celestial bodies have an important effect on human activity, and their beliefs greatly

²² *The Muqaddimah*, vol. 2, pp. 136-137.

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influenced Western astrology.²³ The Middle Eastern astrologers attached particular importance to the conjunction of the planets in explaining pestilence and plague.²⁴ However, planetary ideas are present but not prominent in the plague treatises and accounts of the Black Death in the Middle East. This was due to the fact that the learned Muslim scholars and physicians of this period were generally opposed to such occult sciences as astrology. Ibn Khaldūn's attitude that astrology was incompatible with Islam may be representative of the opinion of the educated class.²⁵ Ibn Sīnā, particularly, gives only slight and obscure references to the remote influence of celestial conditions in his description of plague miasma because of his personal hostility toward astrology.²⁶ Discussion of astrology is found in the later plague treatises primarily in connection with magical beliefs and practices, which leads us to the suspicion that astrological explanations were popular

²³ Sarton, *Introduction*, vol. 2, part 1, pp. 91-93, 112. The foretelling of plague by atmospheric changes is discussed in detail by Tāshköprüzāde in his sixteenth-century treatise, *Majmū'at ash-shifā'*, fol. 33a. Parenthetically, there is a modern medical interest in the effects of unusual celestial and terrestrial changes that precede epidemics, as before the Black Death. The science of epidemiology has yet to explain the difficult question of why an epidemic suddenly begins; earthquakes, floods, sun-spots, etc. may have an effect on the nature of plague bacilli. This belief had a strong influence on nineteenth-century historical studies; see, for example, V. Seibel, *Die Grosse Pest zur Zeit Justinians*, and *Die Epidemienperiode des fünften Jahrhundert vor Christus und die gleichzeitigen ungewöhnlichen Naturereignisse* (Dillingen, 1857).

²⁴ See Māshā'allāh's "On Conjunctions, Religions, and Peoples," which influenced medieval European astrology; specifically, Māshā'allāh ascribed the plagues in the 'Abbāsīd Period to the conjunction of Mercury with the other major planets (Saturn, Jupiter, and Mars): E. S. Kennedy and David Pingree, *The Astrological History of Māshā'allāh* (Cambridge, Mass., 1971), text: fol. 217r; trans.: pp. 54-55. See also Ibn Khaldūn, *The Muqaddimah*, vol. 2, p. 213.

²⁵ *The Muqaddimah*, vol. 1, pp. lxxii-lxxiii; vol. 3, pp. 169, 246, 258-267.

²⁶ *al-Qānūn*, vol. 3, p. 65. Ibn Sīnā wrote a work expressly against the theory of astrological causation; see Ullmann, p. 254.

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among the lower classes, although not with the treatise writers and physicians.

The Andalusian physicians mention astral influences perfunctorily as only a possible prior cause of plague. As Ibn al-Khaṭīb asserted, the ultimate cause of plague was a subject beyond the competence of most men to determine.²⁷ In marked contrast, the European writers attributed to the stars a primary role in the causation of the Black Death and subsequent epidemics.²⁸

Alongside these terrestrial and celestial explanations for the causation of the pestilential miasma, an immediate cause was believed to be contagion, which was recognized by many Muslims, such as Ibn al-Khaṭīb, during the Black Death.²⁹ Although Ibn Khātimah denied the theory of contagion on religious grounds,³⁰ no other treatise contains clearer clinical evidence of the contagious nature of the pandemic. Contamination of the air, according to Ibn Khātimah, may arise from the sick and their clothing, bedding, and utensils. In an interesting illustration of contagion, Ibn Khātimah observed that among the inhabitants of the Sūq al-Khalq in Almería, where the flea-laden clothes and bedding of the sick were sold, almost everyone perished.³¹ Similarly, Ibn al-Khaṭīb attributed the

²⁷ *Muqni'at*, fol. 39b.

²⁸ For the unfavorable conjunction of the planets, occurring in 1345, which was related by the European astrologers to the Black Death, see Campbell, pp. 16, 18, 22, 30-33, 37-44, 63, 65-68, 70, 74-76, and Lynn Thorndike, *History of Magic and Experimental Science* (New York, 1923-1958), vol. 3, pp. 224-232 *et passim*. Particularly influential on the European plague treatise writers was the *Compendium de Epidimia* issued by the medical faculty of the University of Paris in October, 1348, at the request of Philip VI of France (text: *AGM*, vol. 17, pp. 65-76). The European treatises commonly attribute to earthquakes as well the production of pestilences (Campbell, pp. 44-46, 55), but this cause is entirely lacking in the Arabic sources except for the plague treatise of al-Isbānī (see Appendix 3).

²⁹ For the European view of contagion, see Campbell, pp. 56-63.

³⁰ It has been suggested that Ibn al-Khaṭīb's treatise in defense of the theory of contagion was in reply to Ibn Khātimah's denial of contagion on religious grounds (*ibid.*, p. 28).

³¹ *Tahṣīl*, fol. 64b.

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spread of the epidemic to men's coming into contact with the ill, their clothing and furnishings, and attending their funerals.³²

Unlike all other Muslim commentators on plague, and possibly as a rebuttal to Ibn Khātimah's maintenance of orthodoxy specifically, Ibn al-Khaṭīb denied the *fatāwā* or legal decisions of the jurists against the theory of contagion and stated: "The existence of contagion is well-established through experience, research, sense perception, autopsy, and authenticated information, and this material is the proof."³³ He recognized that the plague outbreaks coincided with the arrival of contaminated men from lands where plague was raging. Some isolated communities, on the other hand, remained healthy, such as that of the Muslim prisoners in Seville, who were protected in prison while the city close-by was destroyed. More convincing proof to Ibn al-Khaṭīb were the reports of the nomadic Arabs in North Africa who remained uncontaminated.

Fighting *ḥadīth* with *ḥadīth*, Ibn al-Khaṭīb quoted the tradition about the owner of a flock of healthy animals who should not bring his herd near an owner of sick animals. He also cited the advice of the Caliph 'Umar, who was reported to have said during the plague of 'Amwās that one is justified in fleeing from a plague-stricken region to safety.³⁴ Although Ibn al-Khaṭīb did not develop a theory of contagion, as Jerome Francastor did in his famous *De Contagione* (1546), he did observe contagion-infection empirically. It should be borne in mind as well that Ibn al-Khaṭīb's treatise was conceived within

³² *Muqni'at*, fol. 45b. Volney noted in the late eighteenth century the similar practice of selling the property of the plague dead in Istanbul. It was bought by merchants, who then took it to the bazaars of Alexandria; the merchandise, he believed, perhaps correctly, effectively spread plague to Egypt (*Voyage*, p. 242). See also Niemeyer, *Ägypten zur Zeit der Mamluken*, p. 109, for this practice among the Jewish merchants in Egypt.

³³ *Muqni'at*, fol. 42a.

³⁴ *Ibid.*, fols. 42b-43a; for the *ḥadīths*, see al-Bukhārī, *Le Recueil des traditions mahométanes*, ed. by M. L. Krehl and T. W. Juynboll (Leiden, 1862-1908), vol. 4, pp. 59-60.

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the framework of the miasmatic theory, which differs radically from modern germ theory of disease. In any case, the human transmission of plague as interpreted by Ibn al-Khaṭīb was unacceptable to the orthodox Muslim view of a divine act. The treatise is a clear example of innovation, at a time of crisis, within a traditional and authoritative body of thought. In general, Professor Hirst considers Ibn al-Khaṭīb's work as perhaps "the most instructive of all those treatises written about the Great Mortality."³⁵ But as a personal consequence, Ibn al-Khaṭīb's defense of the contagion theory is probably one of the portions of his writings which gave support to his enemies in their later persecution of him as a heretic.

The reason for this unorthodox belief in contagion-infection during the Black Death was undoubtedly the presence of highly infectious pneumonic plague. Whenever pneumonic plague has been predominant in a plague epidemic, it has naturally lent weight to a theory of contagion-infection over the purely miasmatic theory. The observable effect of pneumonic plague would be to increase the belief in the interhuman transmission of the disease as opposed to miasma. Contagion-infection could account for the spatial irregularity of plague incidence, which was always the major difficulty with the miasmatic theory. Because pneumonic plague recurred in the Middle East after the Black Death, the controversy over infection versus miasma was kept alive.

The debate lasted until the late nineteenth century in the Middle East.³⁶ The difference between the two views had considerable practical effect on the nature of preventive mea-

³⁵ Hirst, p. 51.

³⁶ *Ibid.*, pp. 283-296. A lively summary of the debate on plague in the nineteenth century may be found in E. H. Ackerknecht, "Anticontagionism Between 1821 and 1867," *Bulletin of the History of Medicine*, vol. 22 (1948), pp. 562-593. I was very fortunate during my research in Cairo (1969-1970) to benefit from the work of Dr. Laverne Kunke, who was preparing her dissertation on "The Introduction of Preventive Medicine in Egypt in the Nineteenth Century" for the University of Chicago. Her discussion of plague is in many ways a natural sequel to the present study.

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tures. It can only be remarked here that the last serious medical dispute regarding the nature of plague and its prevention arose at the time of the Egyptian plague epidemic of 1834-1835. The leading exponent of the miasmatic theory was Clot-Bey, the pioneer of western medicine in Egypt under Muḥammad ‘Alī; a large part of the European community in Egypt upheld the contagion theory and, hence, believed firmly in the value of traditional methods of quarantine.³⁷ Because of the irregularities of plague incidence and its restriction to certain geographical areas, such as the Middle East, from the time of the Black Death to the nineteenth century, the miasmatic theory was refined over time according to a number of “localist” theories: the belief that the miasmatic poison arose from particularly unhealthy regions. In this manner, Clot-Bey was a true disciple of Galen, Ibn Sīnā, and Sydenham. Consistent with the medieval Muslim plague treatises, the only prevention against the pestilential effluvium was to change the air by some type of fumigation or possibly by flight to an uncontaminated area.³⁸

These two rather crude conceptions of the nature of plague were constantly reiterated and refined in the Arabic plague treatises especially because flight from plague and the belief in contagion were proscribed by Muslim religious law. There were naturally a number of compromise explanations presented. Some contagionists held that the sick could radiate contagion through the air in their immediate vicinity and thus set up a kind of local miasma. This seems to be the case with Ibn al-Khaṭīb’s interpretation. The miasmaticists were willing to admit a limited degree of contagion at the acme of a severe epidemic, which usually included infectious pneumonic plague.

Whether plague was considered contagious or not, the Arabic historical and literary accounts of the Black Death clearly attest to the belief that plague resulted from an atmospheric miasma. Writing about the origin of the Black Death,

³⁷ Hirst, pp. 65-72.

³⁸ Ibn Sīnā, *al-Qānūn*, vol. 1, p. 182.

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al-Maqrīzī echoes Ibn Sīnā when he states: “The wind transmitted the stench of these cadavers [Khitai and Mongols] across the world. When this empoisoned blast dwelt on a city, an encampment, or some region, it struck with death both men and beasts at the same instant.”³⁹ Referring to the inhabitants of the Mediterranean islands, the same chronicler attributes the death to a wind coming from the open sea; anyone who breathed this wind fell down, stricken by plague, and struck his head against the earth until death ensued.⁴⁰ Such a terrible wind was also considered to have stopped a group of Arabs from North Africa in their attack on Christian Spain after plague had greatly weakened the Christian army.⁴¹

A well-known incident occurred in Damascus during the height of the Black Death. According to Ibn Abī Ḥajalah, who witnessed the plague in the Syrian capital, the plague “blew with the blowing of the wind” in Egypt and Syria.⁴² On Tuesday, 12 Rajab 749/6 October 1348,⁴³ following the afternoon call to prayer,

there appeared a mighty wind which provoked a great yellow dust cloud, then red, then black until the earth was darkened by it entirely and the people remained in it for nearly three hours. They turned to God Almighty and begged His forgiveness. And the people hoped that this cataclysm marked the end of their distress. But the number of deaths did not decrease; it did not prevent a terrible mortality.⁴⁴

³⁹ *as-Sulūk*, part 2, vol. 3, p. 773. Ibn al-Khaṭīb also places the origin of plague in the Far East, where it resulted from decaying corpses on the battlefields that corrupted the air (*Muqniʿat*, fol. 43b). See also the late fifteenth-century *Risālah fī taḍʿīf al-madhbah* by Luṭfallāh aṭ-Ṭūqātī, Istanbul MS no. 3596, fol. 4b or Leiden MS no. 1229, fol. 15b.

⁴⁰ *as-Sulūk*, part 2, vol. 3, p. 776.

⁴¹ *Ibid.*

⁴² *Dafʿ an-niqmah*, fols. 74b, 75a, 85b.

⁴³ *al-Bidāyah*, vol. 14, p. 228, where the date is given as Rajab 11.

⁴⁴ *Dafʿ an-niqmah*, fol. 75b. The account with modifications is also found in *al-Bidāyah*, vol. 14, p. 228; *as-Sulūk*, part 2, vol. 3, p. 779; and *Badhl*, fol. 128b.

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Another witness of the Black Death in Damascus in 749/1348-1349, aṣ-Ṣafadī, used a mélange of metaphors to describe plague. In one instance, he addressed the plague: “Oh, how many times have we seen your wind blowing through us—the wind which drives the mills of plague!”⁴⁵ Ibn Ḥabīb quotes the poetry of aṣ-Ṣafadī that plague encircled Damascus and would kill with its smell.⁴⁶

Similarly, it was reported that during a plague epidemic in Cairo in Rabī‘ I, 790/March-April 1388, a great wind with dust blew so that it nearly blinded the people in the roads, and plague increased during this month.⁴⁷ The plague epidemic of 806/1403-1404 in Cairo was also observed to follow immediately after the blowing of a southern wind that was very cold and wet.⁴⁸

A noteworthy example of this belief in miasma is a statement by Ibn Abī Ḥajalah about the plague epidemic of 764/1362-1363. He tells us that he had seen Arabic books in Egypt which related that near the well-known mosque of at-Tannūr on the Muqaṭṭam Hills, overlooking Cairo from the east, fires were lit at times of plague. Usually, when the people of Cairo saw these fires, they knew that the sultan was planning to leave the Citadel on an expedition, and they would prepare for him. But the sultan also would have fires kindled with tamarisk and *bān* or *ṣadrūs* to take away the pestilential air from the city.⁴⁹ During the Black Death in Europe, Gentile of Foligno recommended to his fellow Perugians various remedies, including building fires in the streets.⁵⁰ Likewise, bonfires were set in London at the end of the Great Plague of 1665, and

⁴⁵ Dār al-Kutub al-Miṣriyah MS no. 102 *majāmi‘ m*, fol. 198b.

⁴⁶ *Durrat al-aslāk*, p. 359.

⁴⁷ Ibn Ḥajar, *Inbā‘ al-ghumr bi-anbā’ al-‘umr* (Cairo, 1969-1972), vol. 1, pp. 350, 353-354.

⁴⁸ *Ibid.*, vol. 2, p. 260; see also *an-Nujūm*, Popper trans., vol. 14, p. 80.

⁴⁹ *Jiwār al-aḥyār*, fol. 86a, and *Kitāb at-ṭibb*, fol. 143a.

⁵⁰ Campbell, p. 68.

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in the towns of Austria and Germany.⁵¹ This practice is almost certainly derived from Galen, who attributed to Hippocrates the instructions to build fires throughout the city during the great Athenian pestilence to purify the polluted air.⁵²

Finally, there was a common belief among Muslims that plague was caused by evil jinn or demons that attacked mankind directly. This view is found in the religio-legal treatises, especially in the tract of Ibn Ḥajar, and is most vividly illustrated in the popular magical beliefs and practices.⁵³

2. Prevention

The clearest evidence for the widespread belief in the miasmatic theory of plague at the time of the Black Death is the prophylaxes recommended by the contemporary authors. Since a good Muslim was ideally not supposed to flee if he found himself in a plague-stricken land, there may have been an additional emphasis in the non-medical as well as the strictly medical works on ways to improve his fate. In any case, the extensive advice for prevention and treatment suggests what was common medical practice in medieval Muslim society.

It must be mentioned at the outset in a discussion of plague prevention that a number of writers of plague treatises, particularly the Andalusian doctors, felt compelled to argue for the acceptability and benefit of medicine itself in understand-

⁵¹ Hirst, p. 44; see also Campbell, p. 41, and Shrewsbury, *A History of Bubonic Plague*, pp. 190, 461.

⁵² *Medicorum*, vol. 14, p. 281, which attributes to Hippocrates the advice to build fires throughout the city during the Athenian pestilence and to cast on the fires flowers and wreaths. Ibn Sīnā apparently does not mention the use of such fires.

⁵³ A comparable interpretation of demons as the vehicle of pestilence in medieval Europe is presented by Marsilio Ficino (d. 1499); see Thorndike, *History of Magic*, vol. 4, p. 564. In attempting to account for Chaucer's relative silence about plague, Shrewsbury states "that in adult life he believed in the superstition of the personification of pestilential disease—which was a common aberration of the public mind up to the eighteenth century—in which case the less he said about plague the better it would be for his personal safety." (*A History of Bubonic Plague*, pp. 41-42.)

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ing and treating plague. This was opposed to the fatalistic view that plague was sent by God and should be simply endured. Because of this pervasive attitude, most of the Muslim authors recommended penance, supplication, and prayer along with their medical instructions.

Because they have a common source, the Middle Eastern and Andalusian remedies for plague are very similar in nature. This common source of information for prevention and treatment, often poorly distinguished in the plague treatises, was of course the classical texts or the derivative advice of Arabic doctors, primarily Ibn Sīnā's *al-Qānūn*⁵⁴ or one of the numerous commentaries on his work.⁵⁵ In addition to relying on the counsel of Ibn Sīnā, one treatise explicitly draws its preventive measures from the early 'Abbāsīd physician, Yūḥannā ibn Māsawayh (d. 243/857), who suggested the sucking of an acrid pomegranate or plum at the time of an epidemic and the eating of lentils, Indian peas, and pumpkin seeds to guard oneself from plague. Further, one should drink sour fluids such as juices from lemons and pomegranates, grapes and onions. The treatise writer comments that eating a pickled onion every day before breakfast would certainly prevent a person's being struck by plague.⁵⁶ Such unappetizing remedies are fairly typical of methods of plague prevention found in the treatises.

Ibn Khātimah gives a more detailed discussion of preventive medicine; he lists six ways that would both improve the air and make men's bodies more resistant to the disease.⁵⁷ Con-

⁵⁴ *al-Qānūn*, vol. 1, p. 182.

⁵⁵ Ibn Abī Ḥajalah explicitly takes his remedies from Ibn Sīnā, Ibn an-Nafīs, and Ibn al-Akfānī (*Kitāb at-tibb*, fols. 142b-143b). Cf. *Badhl*, fol. 113b; al-Hijāzī, *Juz' fi t-tā'ūn*, fol. 154b; Tāshköprüzāde, fols. 35a, 36b; and Ibn Abī Sharīf al-Kāmilī, *Kitāb fi ahkām at-tā'ūn*, fol. 157b. See also Ata, "Évolution de la médecine en turquie," p. 100.

⁵⁶ Tāshköprüzāde, fol. 35a.

⁵⁷ *Taḥṣīl*, fols. 65a-69b. The third Andalusian physician, ash-Shaqūrī, discusses prophylaxes and treatment in his treatise, *Taḥqīq an-naba' 'an amr al-waba'* (see Appendix 3). While very similar to Ibn Khātimah's medical advice, it is entirely a layman's guide to plague prevention and treatment. This unpublished work was probably written during or

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cerning the air, one should seek fresh air, live in a house facing north, and surround oneself with cool fragrances of flowers such as myrtle and eastern aspen. A house and its occupants should be sprinkled with rosewater mixed with vinegar. One should rub his face and hands with other scents as citron, lemon, and cool flowers such as roses and violets. It is recommended that one burn sandalwood together with some aloes-wood and drink a mixture of aloes-wood with rosewater. Also, one should guard against the sun, warm winds, ovens, etc.⁵⁸

One of the earliest Arabic medical compendia, written by 'Alī ibn Rabban aṭ-Ṭabarī (d. 240/855), relates from Hippocrates that sweet-smelling shrubs should be piled up around the cities and towns; thereby the scent would prevent the pestilential air from reaching the inhabitants.⁵⁹ According to a late fifteenth-century account of plague, the open places were believed to be deadly during an epidemic; to stay indoors was considered preferable. The places of smoke and dirt were supposed to be effective against the plague miasma, apparently because of their stronger stench. A popular proverb was that dirty areas were the most healthful places during an epidemic!⁶⁰

shortly after the Black Death while the author was in Granada. Because this opusculum has never been the subject of any investigation, it may be useful to outline its contents. The author begins by saying that it is permissible for Muslims to use medicine and that it does not violate God's order. Plague is caused by a corruption sent to the stable air, and it is detestable that most people are not usually conscious of the air and the need for it. After these remarks (fols. 106b-107b), the treatise is devoted to the improvement of the air (fols. 107b-108b) and the improvement of the human body by nutrition and medicine (fols. 108b-110b), with a digression on matters that do not necessitate consulting a doctor (fols. 110b-111a). The digression includes a number of magical practices.

⁵⁸ Cf. the similar preventive measures recommended by al-Majūsī, *Kitāb al-malakī*, vol. 2, pp. 62-65.

⁵⁹ Ullmann, p. 244. This was also advised by Ibn Khātimah.

⁶⁰ al-Manṣūrī, *Dār al-Kutub al-Miṣriyah* MS no. 102 *majāmi' m*, fol. 201b.

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Because of his belief in the theory of contagion, Ibn al-Khaṭīb naturally suggested avoiding congested areas, where one suspected a corruption of the air by the plague-stricken and their clothing and utensils.⁶¹ As-Subkī stated that he saw the people prohibited from visiting the sick during the Black Death to the point that no one visited the afflicted, but Ibn Ḥajar denied this.⁶² Ibn Abī Ḥajalah, who witnessed the Black Death in Damascus, directed the reader of his treatise not to sit too close to the ill because the corruption of the air by the sick was the reason for infection. He cites as support for this advice the interesting tradition of the Prophet that the Prophet found leprosy on a new wife and sent her away immediately.⁶³

The second factor for the prevention of plague infection, according to Ibn Khātimah, is to keep oneself as quiet as possible and to be moderate in movement, so as to avoid accelerating one's breathing. In another plague treatise, the '*ulamā*' or Muslim scholars are said to have argued in favor of the traditional prohibition against fleeing because traveling would excite the humors and make one more vulnerable to the disease.⁶⁴

Third, Ibn Khātimah suggests that one should take care with his diet, as in the choice of bread—coarse bread is better than fine and black better than coarse.⁶⁵ Certain meats are beneficial, especially when cooked with lemon, sour citron, and grape leaves, and served with vinegar. Fruits are recommended, such as pears and pomegranates, but particularly plums and white grapes. Corn bread and everything made from corn should be avoided as well as all heavy foods such as thick broths, oatmeal, gruel, biscuits, mushrooms, and cheese-like foods. All old slaughtered meat should be avoided, along

⁶¹ *Tahṣīl*, fol. 4a.

⁶² *Badhl*, fol. 114b. It should be recalled that Ibn Ḥajar was not a witness to the Black Death but wrote his treatise in the first half of the fifteenth century.

⁶³ *Kitāb at-ṭibb*, fol. 142b.

⁶⁴ *Ibid.*

⁶⁵ See Campbell's brief comparison of Christian and Muslim treatises with regard to diet, pp. 74-76.

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with eggplant, cabbage, and garlic. One should not sleep after eating and should not miss meals or eat at irregular hours. Fresh, sweet, clear-flowing water from a spring is highly desirable. Ibn Khātimah also urges a number of concoctions, such as a daily drachma of syrup of basil, which the author himself had tried. Barley water, vinegar mixed with water, and most fruit juices would aid in calming the flow of blood and cool the body's bile. Furthermore, drinking Armenian clay is recommended on the authority of Galen.⁶⁶

This last preventive measure is another example of the considerable influence of Galen in medieval Islamic medicine,⁶⁷ as well as of human credulity. Armenian bole is an argillaceous earth brought primarily from Persia and Armenia; its deep red color is due to iron oxide in the clay. Galen had first advised the use of Armenian bole as an astringent for wounds and ulcers before he advocated it as a specific for pestilence.⁶⁸ He recommended it as an anti-pestilential specific in his *De simplicium medicamentorum temperamentis et facultatibus libri* (Book 11, Chapter 1): "All those who used it were promptly cured. Those who felt no effect from it died; no other remedy could replace it, . . . those with whom this remedy failed were incurable."⁶⁹

⁶⁶ *Taḥṣīl*, fol. 66b.

⁶⁷ See Ibn Khaldūn, *The Muqaddimah*, vol. 3, p. 149.

⁶⁸ Hirst, p. 43; Crawford, *Plague and Pestilence*, p. 74; *Oxford English Dictionary*: "bole." The whole subject of earth-eating is exhaustively treated by Berthold Laufer in his monograph, "Geophagy," *Field Museum of Natural History*, Publication no. 280, Anthropological Ser., vol. 18, no. 2 (Chicago, 1930), pp. 101-198, especially pp. 150-155 for this phenomenon among the Persians and Arabs. On the various types of edible clays, particularly Armenian clay for plague, see Ibn al-Bayṭār (d. 646/1248), *Jāmi' fi ṭ-ṭibb* (*GAL*, vol. 1, p. 492; L. Leclerc, trans., *Traité des simples* [Paris, 1881], vol. 2, pp. 421-427; cf. Carra de Vaux, *Les Penseurs de l'Islam* [Paris, 1921], vol. 2, pp. 289-296). Ibn al-Bayṭār cites Ishāq ibn Imrān (*GAL*, vol. 1, p. 232, *Supplement*, vol. 1, p. 417), a tenth-century physician, that Armenian earth was salutary in cases of plague, being taken both internally and externally.

⁶⁹ *Medicorum*, vol. 12.

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Armenian clay was used for both prevention and treatment of plague victims. Ibn Sīnā suggests using clay on the buboes,⁷⁰ and al-Maqrīzī is possibly referring to Armenian clay when he says that “some people devoted themselves to coating their bodies with clay” during the Black Death in Cairo.⁷¹ This use of clays is included by Ibn al-Wardī in his description of the remedies contrived by “the nobles of Aleppo studying their inscrutable books of medicine” during the Black Death. He tells us that these doctors, too, advised smearing the buboes with Armenian clay.⁷²

As for the later plague treatises, Ibn Haydūr suggests the general employment of Armenian clay.⁷³ Ibn Abī Ḥajalah states in his plague tractate, written shortly after the Black Death, that healing clay is “useful to drink for the plague, such as Armenian [clay] and blue bdellium.”⁷⁴ The desirability of drinking Armenian clay with water and vinegar, as advocated by Galen, along with other healing clays, is still to be found in a sixteenth-century plague treatise.⁷⁵ Leo Africanus also witnessed the use of Armenian clay in North Africa during plague epidemics in the early sixteenth century.⁷⁶

The utilization of Armenian bole for plague was known in Europe as well. Guy de Chauliac, the physician of Pope Clement VI, recommended consoling the bodily humors with this clay during the Black Death in Avignon.⁷⁷ The Medical

⁷⁰ *al-Qānūn*, vol. 3, p. 222. For other references to Armenian clay in Arabic medicine, see Dorothee Thies, *Die Lehren der arabischen Mediziner Tabari und Ibn Hubal über Herz, Lunge, Gallenblase und Milz* (Bonn, 1968), p. 176; the work contains a helpful appendix of Muslim *materia medica* (“Alphabetisches Verzeichnis der auftretenden Medikamente”). See also al-Majūsī, *Kitāb al-malaḳī*, vol. 2, p. 62.

⁷¹ *as-Sulūk*, part 2, vol. 3, p. 763.

⁷² *Risālat an-naba'*, p. 186.

⁷³ Ibn Haydūr at-Tādālī, *Risālah fī al-amrād al-waba'iyah al-ḳā'inah 'an fasād al-aghdhiyah*, Dār al-Kutub al-Miṣrīyah MS no. 183 *majāmi'* m, fol. 105b.

⁷⁴ *Kitāb at-tibb*, fol. 143a; the author took the information from Ibn al-Akfānī.

⁷⁵ Tāshköprüzāde, fols. 34b, 35a, 36b-37a.

⁷⁶ Quoted in Marchika, *La Peste en Afrique Septentrionale*, p. 14.

⁷⁷ Crawford, *Plague and Pestilence*, p. 12.

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Faculty of the University of Paris in its official pronouncement on the Black Death gives a number of recipes for “smelling apples,” which were carried in the hand and frequently inhaled to strengthen the principal organs.⁷⁸ The simplest recipe for these nosegays was taken from the Arabic physician, Yūḥannā ibn Māsawayh (John Mesuë). He had prescribed:

Equal parts of black pepper, and red and white sandal, two parts of roses, half a part of camphor, and four parts of bol armeniac. All but the camphor are to be ground very fine, sifted and shaken, pounded during a week with rosewater, then the camphor mixed with them, and the apples made with paste of gum arabic and rosewater.⁷⁹

Aside from Armenian bole, Ibn Haydūr prescribed another typical preventive concoction to ward off plague. One should take two parts of aloes and one part each of myrrh and saffron and heat them together. Then take a small *dirhem*'s weight of the mixture with an ounce of sweet basil every day. The author tried it, and he knew of no one who had followed this prescription and died of plague.⁸⁰

According to Ibn Khātimah, men should avoid the permitted wines⁸¹ as well as the prohibited wines, all kinds of milk because of the fermentation, and bad water. Fourth, it is

⁷⁸ See John M. Riddle, “Pomum ambrae. Amber and Ambergris in Plague Remedies,” *Sudhoffs Archiv*, vol. 48, part 2 (June, 1964), pp. 111-122.

⁷⁹ Campbell, p. 68. Derived from a Latin translation of the *Qānūn* or from Galen directly is a fourteenth-century recipe for a plague preventive sent to the friars of Tegernsee; it contained Armenian bole together with *terra sigillata* moistened with citrus juice (“Ueber die grossen Seuchen,” p. 103). Armenian bole continued to be used in Europe after the Black Death as a plague treatment; see J.-N. Biraben, “La Peste dans l’Europe Occidentale et le Bassin Méditerranéen,” *Concours Medical*, vol. 35 (Paris, 1963), p. 789.

⁸⁰ *Risālah fī al-amrād*, fol. 106a. This antidote is ascribed to Galen in *Tāshköprüzāde*, fol. 35b, in addition to a large number of various other concoctions.

⁸¹ *nabīdh*: a beverage made of dates or raisins; before it ferments, it is a lawful drink.

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best to get a normal night's sleep with the room open to the north wind. Fifth, whoever is exposed to plague should avoid constipation by eating cooked plums, violets, tamarind, etc. Baths and cohabitation should be avoided, while bloodletting is strongly recommended.⁸²

Last and very interesting is Ibn Khātimah's psychological advice in order to maintain morale. It is best for the spirit to experience joy, serenity, relaxation, and hope; one should seek pleasant and attractive company—the best companion being the Qur'ān. Otherwise, there were history books, humorous works, and love stories to occupy the mind. Men should avoid talking about anything that would evoke sadness, and should refrain from all excitement. These measures, warns the author, should not be neglected because one believed that everything depended on God.

3. Treatment

Ibn Sīnā recommended bloodletting of the plague victim to relieve his fever and the excess of blood in the body.⁸³ Bloodletting was apparently quite common during the Black Death. Ibn Khātimah advocated it for the plague-stricken because the bad air increased the burning of the heart and thus increased the mass of blood that the heart could not control. According to this author, by decreasing the quantity of blood, bloodletting frees the life-force in the arteries. Ibn Khātimah had seen people having as much as eight pounds of blood drawn during the Black Death, although the usual amount was about five pounds. He himself had, at first, hesitated to prescribe it, but he tried it and was satisfied with its effects.⁸⁴

After people learned this and saw its effects, they began to have bleeding done for themselves, without medical prescription, several times a month, without consideration or fear, without feeling harm or weakness, and without contracting sickness in consequence.⁸⁵

⁸² *Tahṣīl*, fols. 67a-68b.

⁸³ *al-Qānūn*, vol. 3, p. 122.

⁸⁴ *Tahṣīl*, fols. 68b-69b; see also *Muqni'at*, fol. 40a.

⁸⁵ Quoted in Campbell, pp. 72-73.

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⁸⁵ Quoted in Campbell, pp. 72-73.

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Ibn Khātimah recommended venisection and cupping for the treatment of plague victims, as well as for its preventive qualities. The victim should immediately be given a mixture of two ounces of both vinegar syrup and rose syrup and then be bled where the pain was most severe, but if the illness recurred or the patient had been in contact with the sick, there was little chance of curing him.⁸⁶

Ibn Haydūr, writing in the half-century after the Black Death, saw no objection in bloodletting to relieve the plague-stricken. Ibn Ḥajar also believed in the utility of bleeding. He informs us that all the doctors of his time (d. 852/1449) and before him had completely ignored this measure advised by Ibn Sīnā. According to Ibn Ḥajar, they did not treat the plague victims with bloodletting because, until it became common among the people, they thought it was prohibited by religion.⁸⁷ A sixteenth-century plague treatise⁸⁸ cites Ibn Sīnā as well in favor of bloodletting during an epidemic, together with the same advice from Abū Hāmid Najīb ad-Dīn as-Samarkandī (d. 619/1222).⁸⁹

There is surprisingly little information concerning the excising of the plague buboes in the Arabic sources, but it seems to have been common practice. Ibn Sīnā had recommended their removal if possible.⁹⁰ Ṭāshköprüzāde (d. 968/1560) mentions that the Turks did not consider the plague boils different from any other boils and simply cut them away immediately, and nothing remained except the scars of the surgery. This had been tried on a friend of the author's, and it had been successful. The writer related that a Turkish student had cut out a plague boil on his body, and the writer had seen the green-colored gland that had been removed.⁹¹

A number of remedies to be placed on the plague boils were

⁸⁶ *Tahsīl*, fols. 74a-75a; see also Campbell, pp. 86-88.

⁸⁷ *Badhl*, fol. 113b. Cf. Thorndike, *History of Magic*, vol. 4, p. 219.

⁸⁸ Ṭāshköprüzāde, fol. 36b. ⁸⁹ *GAL*, vol. 1, p. 491.

⁹⁰ *al-Qānūn*, vol. 3, p. 122. Cf. Galen, *Medicorum*, vol. 19, p. 524.

⁹¹ Ṭāshköprüzāde, fol. 37b.

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suggested. Besides Armenian clay, which has been discussed, Ibn Sīnā advised bathing the bubo with a sponge soaked in water and vinegar or oil of roses, apples, mastic, or myrtle. When the bubo suppurred, it should be bathed with camomile water, dill, and other delicate ointments.⁹² While some recommended a great deal of cold water to relieve the pain of the boils, others placed the yolk of an egg on the bubo. When the yolk dried, it was expected to heal the boil.⁹³

Ibn Ḥajar and others believed that nothing was more beneficial than violets which, in various forms, should be rubbed on the body or drunk.⁹⁴ Al-Ghazzalī is reported to have taken the advice of ash-Shāfi‘ī that nothing that the latter had seen was more advantageous during an epidemic than violets rubbed on a patient or drunk.⁹⁵ As-Suyūṭī (d. 911/1505) questioned ash-Shāfi‘ī’s recommendation of violets as being applicable not to plague, but to another epidemic disease. However, as-Suyūṭī admitted that the people during his own lifetime used the ointment of violets to stop the disease at its advent.⁹⁶ A plague treatise written in Egypt as late as 1125/1713-1714 still regarded violets as the best treatment for the plague victim.⁹⁷

In general, Ibn Sīnā urged those things for the plague-stricken that would preserve and strengthen the heart—for example, cooling fruit juices, scents such as roses, camphor, and sandal, and foods such as lentils with vinegar and meats cooked in vinegar. The frequent recommendation of fruit juices as a cure was probably due to its efficacy as a thirst-quencher, for dehydration was an invariable and distressing concomitant of the hyperpyrexia of bubonic plague. In addition, the bed of the ill should be covered with leaves of the

⁹² *al-Qānūn*, vol. 3, p. 22.

⁹³ *Tāshköprüzāde*, fol. 37b.

⁹⁴ *Badhl*, fol. 44b; *al-Ḥijāzī*, *Juz’ fi ṭ-ṭibb*, fol. 151b; Ibn Haydūr, *Risālah fi amrāḍ*, fol. 105a.

⁹⁵ *Tāshköprüzāde*, fol. 35a.

⁹⁶ *Mā rawāhu l-wā‘ūn*, p. 154.

⁹⁷ ‘Abd al-Mu‘ṭī as-Saḥalāwī, *Risālah taḥīr ahl al-Islām bit-tā’n wa-ṭ-ṭā’ūn al-‘āmm*, Tanṭā Library (Egypt), section *ḵha*, no. 275, fol. 4a.

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ḵhilāf tree, violets, roses, white-lilies, and other flowers. And cool, strong “coatings,” presumably plasters, should be placed over the heart.⁹⁸

Ibn Khātimah offered a large number of treatments for the plague fever, the buboes, and the pustules.⁹⁹ The general prognosis depended on the symptoms; both Ibn Khātimah and Ibn al-Khaṭīb despaired of any remedy when the victim began to spit blood, indicating pneumonic plague. Nevertheless, their fellow countryman, ash-Shaqūrī, strongly warned that a doctor like himself should be consulted in any case where a person had contracted the disease:

The men of religion and reason, who were appointed to deal with the affairs of the Muslims, should prevent the people of ignorance and adventure from harming the people by giving them medicines and bleeding them without consulting the doctors. . . . What would harm the druggist or the bloodletter if they acted according to the doctor’s opinion!¹⁰⁰

Furthermore, a doctor is the best judge of compound medicines and their proper use for serious illnesses such as plague. In another plague treatise, Yūḥannā Ibn Māsawayh is quoted for his advocacy of simple, rather than compound, drugs for plague.¹⁰¹

Looking back from our vantage-point of modern science, it is impossible not to feel a certain impatience—but also a certain sympathy—with the largely futile advocacy of useless and

⁹⁸ *al-Qānūn*, vol. 3, p. 122.

⁹⁹ *Tahṣīl*, fols. 69b-83b. Galen’s theory of “contraries” is conspicuous in the Muslim plague treatises. According to this belief, a hot fever during an epidemic should be alleviated by a cooling remedy. To cite Galen on general diseases: “Let us suppose, for instance, that we want to cure a hot disease without realizing that first, to cure it, we need to know that opposites cure opposites. For it has been clearly shown that this knowledge is the all-embracing general preliminary to everything that is known about types of therapy.” (Malcolm Lyons, *Galen on the Parts of Medicine* [Berlin, 1969], pp. 46-47.)

¹⁰⁰ *Tahqīq*, fols. 110a-110b.

¹⁰¹ *Tāshkōprüzāde*, fol. 35b.

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sometimes harmful remedies that were earnestly devised. The medical and legal treatises must reflect what was, to some degree, actual practice during the calamity. Yet a writer at the time of the plague epidemics in the late fifteenth century perfunctorily mentions a number of such remedies but concludes with the adage: “For every disease there is medicine to cure it except for madness, plague and old age.”¹⁰²

B. RELIGIOUS INTERPRETATION

Along with the naturalistic views of plague, a consensus of orthodox Muslim belief may be extracted from the plague treatises. It must be borne in mind that the religio-legal conceptualization of the disease imposed itself on the imagination of all those who dealt with the problem of plague epidemics. Thus, the religious interpretation should not be understood as distinct from the naturalistic point of view—no matter how incongruous—nor should the religious explanation be considered a wholly static one.

The religious attitudes toward plague changed and provoked continual controversy until modern times. The debated points of interpretation, which have already been discussed, were the following three major tenets:

1. A Muslim should not enter or flee from a plague-stricken land.
2. The plague is a martyrdom and a mercy from God for a Muslim and a punishment for an infidel.
3. There is no infection (contagion).

These principles were operative in Muslim society from an early time, as we have seen, when plague appeared in the newly established Muslim empire in the Middle East. This is particularly clear in the case of the plague of ‘Amwās,¹ which itself affected later interpretations of plague.

¹⁰² al-Manṣūrī. Dār al-Kutub al-Miṣriyah MS no. 102 *majāmi’ m*, fol. 201b.

¹ See chap. II.

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Despite the difficulty of the first *hadīth* or tradition for later generations, who were naturally anxious to avoid plague, the prohibition against flight appears to be a pragmatic medical principle, rather than a strictly theological one. It may argue historically for the recognition of contagion-infection in the plague epidemics that afflicted the early Muslims and the desire to limit the spread of epidemics. Theologically, the principle is consistent with the belief that God sent his mercy and martyrdom in the form of plague, which was not considered to be infectious, to a specifically favored community.

The principle that there was no contagion-infection among men should be interpreted from a theological point of view: only God can cause plague or other diseases. This belief, however, impinged on the presentation of the physicians' clinical observations of plague that demonstrated its contagious nature. We have seen how Ibn Khātimah felt constrained to accept this tenet as established by the *Sharī'ah* or Muslim Law in opposition to his empirical perception of the Black Death,² while his colleague, Ibn al-Khaṭīb, stood foursquare against the religious establishment by arguing in favor of contagion. In all three tenets, there is a tension between what the traditions prescribed and what may have been actually observed and felt by a Muslim community subjected to a plague epidemic.

Perhaps the best manner of grasping the predominantly religio-legal interpretations of the Muslim plague treatises, which deal with these principles and their ramifications, is to describe fully one of them as a representative type.

Ibn Ḥajar al-'Asqalānī's plague treatise, *Badhl al-mā'ūn fī fadl at-tā'ūn*,³ is a good example of this literature because it presents the fullest explanation of the relevant tenets of ortho-

² *Tahṣīl*, fols. 83b-90b, 92a-105a. The author's discussion of this tenet as well as the others has been completely omitted from Dinānah's translation of the text.

³ as-Sakhāwī, *al-Jawāhir wad-durar fī tarjamat Shaykh al-Islām Ibn Ḥajar*, Paris MS no. 2105, fol. 153a; *GAL*, vol. 2, p. 82; Sabri K. Kawash, "Ibn Ḥajar al-'Asqalānī (A.D. 1372-1449): A Study of the Background, Education, and Career of an 'Ālim in Egypt," unpubl. diss., Princeton University, 1969, p. 196.

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dox Islam on plague, based on the collation of the early *ḥadīth* literature, as well as the consideration of contemporary medical and theological views evolved during the Black Death.⁴ The author classified his treatise as a work of *furū'* or "applied ethics"⁵ (consisting of the systematic elaboration of canonical law in Islam). The treatise was written as a direct result of plague's reappearance during the author's lifetime. He tells us that he had drafted a work on the plague epidemic of 819/1416 but rewrote it much later. We know that Ibn Ḥajar himself was struck by plague when it occurred in Egypt in 848/1444.⁶ On the night of Sunday, 5 Ṣafar/24 May, he felt a pain under his right arm, where a boil grew as large as a peach. It disappeared completely by the tenth of the same month.⁷ Since the latest date of the work is 848/1444, the final revision may be dated within the four years before his death in 852/1449.⁸ The plague treatise is divided into five chapters and an epilogue. The epilogue is an historical account of the occurrences of plague in Islamic history and is a common feature of the

⁴ The plague treatises, in general, should be viewed within the context of an Islamic tradition of religio-legal learning. The medical traditions of the Prophet and his companions hold an important position in the history of Islamic medicine. This accounts for the remarkable amalgam of religio-legal scholarship and medical knowledge found in the works of the *'ulamā'*, known as "prophetic medicine" (*aṭ-ṭibb an-nabawī*). See the discussion of Ata, "Évolution de la médecine en turquie," p. 101, and Ullmann, pp. 17-20, 185-189. Muḥammad may have taken a number of his medical ideas from al-Ḥārith ibn al-Kaladah (d. ca. A.D. 634) of aṭ-Ṭā'if, who studied at Jundishāpūr and was known as "the doctor of the Arabs" (Ibn Abī Uṣaybi'ah, *'Uyūn al-anbā' fī ṭabaqāt al-aṭibbā'*, ed. by A. Müller [Cairo, 1882], vol. 1, pp. 109, 113).

⁵ *Badhl*, fol. 109b.

⁶ Most of the contemporary Arabic authors were personally affected by the plague epidemics. During the epidemic of 819/1416-1417, Ibn Ḥajar relates that two of his daughters died (*Inbā' al-ghumr*, British Museum Add. MS no. 7321, fol. 228a) and his eldest daughter, Zayn Khātūn, died in the epidemic of 833/1429-1430 (Kawash, "Ibn Ḥajar al-Asqalānī," p. 59).

⁷ É. M. Quatremère, *Histoire des Sultans Mamlouks de l'Égypte* (Paris, 1837-1845), vol. 1, p. 216.

⁸ See Appendix 3.

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plague treatises in the Middle East. A detailed examination of this work furnishes, in varying degrees, the normative conceptualization of plague and helps to explain, in part, the Muslim social response to the disease.

The first chapter discusses the early history of plague. The disease is considered a punishment by God on mankind before the advent of Islam.⁹ The author draws on traditions derived from the Old Testament prophets to show God's heavy punishment in the form of plagues, particularly on the people of Israel.¹⁰ For example, David's numbering of his people offended God, and in retribution for his presumption, David was given the choice of enduring seven years of famine, three months of flight before his enemies, or three days of pestilence. He chose the pestilence, and seven thousand people died.¹¹ The story is also related of God's punishment of the Pharaoh for not giving Moses and Aaron freedom to leave Egypt.¹² And finally, Ibn Ḥajar gives an account of God's chastisement of the Israelites by plague for their whoredom with the daughters of Moab.¹³

On the other hand, plague is considered a mercy and a martyrdom for the people of Muḥammad and a punishment for the infidel.¹⁴ A number of pious traditions are cited to substantiate this claim, which is the major theological invention of the Muslim theologians and is, to my knowledge, unique in Semitic religions.¹⁵ It avoids the difficulty of explaining an evil

⁹ *Badhl*, fols. 3b-6a.

¹⁰ *Ibid.*, fols. 7a-10b.

¹¹ *Ibid.*, fol. 7b. 1 Chron. 21.

¹² *Ibid.*, fol. 8a. Qur'ān 7:133-135. Exodus 9:8-11: "And the Lord said unto Moses and unto Aaron, Take to you handfuls of ashes of the furnace, and let Moses sprinkle it toward the heaven in the sight of Pharaoh. And it shall become small dust in all the land of Egypt, and shall be a boil breaking forth with blains upon men, and upon beasts, throughout the land of Egypt." It is a curious coincidence that the year of the plague of 'Amwās (A.H. 18) was called by the Arabs "the Year of the Ashes."

¹³ *Ibid.*, fol. 8b. Qur'ān 2:59; Numbers 25:1-9.

¹⁴ *Ibid.*, fols. 6a-7a.

¹⁵ al-Bukhārī, *Le Recueil des traditions mahométanes*, vol. 2, p. 209, nos. 1 and 2; vol. 4, p. 60, nos. 5 and 6.

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incompatible with God's nature. The primary emphasis, as the third chapter of the treatise makes clear, is the desirability of this martyrdom by plague.¹⁶ In the customary list of the five Muslim martyrdoms, death by plague and by battle are always included;¹⁷ they are equal in God's favor, and the believer is assured of reaching paradise.¹⁸

It is no accident that the descriptive terminology of plague is closely related to the terms of the actual *jihād* or holy war. The ideology of the *jihād* possibly served as a conscious and useful analogy for the Muslim jurists when they confronted the issue of plague. For example, in the account of 'Umar and the plague of 'Amwās the medieval scholars strongly disagreed with 'Umar's decision to withdraw Abū 'Ubaydah from the plague menace. They related the tradition of 'Ā'ishah, the Prophet's wife, that fleeing from plague was like fleeing from the army,¹⁹ and whoever stayed in the time of plague was like a *murābiṭ*.²⁰

The correlation between the holy war and plague is most clearly seen in the important tradition of the Prophet: "The destruction of my nation will be by piercing (*ta'n*) and plague (*tā'ūn*)." That is to say, the end of the Muslim people will be by martyrdom through battle and plague.²¹ Another example of this equation is a tradition of the Prophet:

The martyrs and those who died in their beds argue with our Lord about those who were killed by the plague. The martyrs say, our brothers died as we died. The deceased on their beds say, our brothers died on their beds as we died. Our Lord said: Consider their wounds which resemble the wounds of the slaughtered, and they are among them. And behold, their wounds had been similar; so they joined the martyrs.²²

¹⁶ *Badhl*, fols. 46b-63a.

¹⁷ *Ibid.*, fols. 46b-49a.

¹⁸ *Ibid.*, fols. 50a-54a.

¹⁹ *Ibid.*, fol. 85a.

²⁰ *Ibid.*, fol. 86a.

²¹ *Ibid.*, fols. 111b-12a. I have followed Ibn Ḥajar's interpretation of the *ḥadīth*.

²² *Kitāb at-ṭibb*, fol. 145b.

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However, not all of the Muslim scholars considered plague as a mercy and a martyrdom. Ibn al-Wardī laments during the Black Death in Aleppo: “We ask God’s forgiveness for our souls’ bad inclination; the plague is surely part of His punishment.” With an inconsistency which belies the tension between emotion and reason, Ibn al-Wardī claims as well that plague is a martyrdom and a reward for a Muslim despite his sins, while death by plague is a punishment for the disbelievers.²³ Ibn Abī Ḥajalah argues that the ultimate reason for plague is God’s punishment of His people for their sins, such as adultery, usury, drinking alcohol, and so forth.²⁴ This certainly finds support in the historical accounts that relate the renewed enforcement of Muslim laws, particularly against alcohol and moral laxity, during periods of plague epidemics.²⁵

A striking illustration of this idea of punishment took place during the plague epidemic of 841/1438 in Egypt. After the reading of the *Ṣaḥīḥ* of al-Bukhārī in the Citadel, Sultan Barsbay asked the assembled judges, jurists, and scholars whether men’s sins were being punished by God with plague. One suggested that plague was caused by fornication and blatant prostitution. After vehement discussion, the sultan suggested prohibiting all women from going out into the streets. The next day, the council agreed on this measure, and a proclamation was made in Cairo, Fuṣṭāṭ, and the suburbs. A woman who left her house was consequently threatened with all kinds of maltreatment and even death. The sultan appointed a ruthless market inspector (who died a month later of plague) to enforce the prohibition, despite numerous complaints. After widespread suffering, the sultan proclaimed that female slaves could go to the markets for necessities, but their faces must be unveiled, so that no one could use the veil as a disguise. He also allowed old women to go out to the markets, and women

²³ *Risālat an-naba’*, p. 187.

²⁴ *Kitāb at-tibb*, fols. 143b-144b.

²⁵ *Badhl*, fols. 6a-7a, 122b; *Daf an-niqmah*, fols. 42a-43a; Ibn Ḥajar, *Inbā’ al-ghumr*, vol. 1, p. 351; *as-Sulūk*, part 2, vol. 3, p. 777, and part 4, vol. 2, pp. 1031-1033; Sauvaget, “Décrets Mamelouks de Syrie,” *Bulletin d’Études Orientales*, vol. 2 (Damascus, 1932), pp. 11-15, 24.

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might go to the baths but not stay in them until nightfall. The plague increased, and the women were further distressed by not being permitted to attend the funerals of their children and relatives. Ibn Taghrī Birdī, a contemporary historian, comments that this decree was the result of the ineptitude of the sultan and the bad judgment of his officials, for “surely the virtuous woman is recognized even if she is in a tavern, and a harlot is recognized even if she is in the Sacred House.”²⁶

During this same epidemic, the sultan was dying, and he assembled the mamlūk army before him at the Duhayshah Gate, overlooking the Sultan’s Park.²⁷ He cursed them for what they had done during his rule and said that God had sent plague epidemics in 833/1429-1430 and again in 841/1438 because of their crimes and corruption; as a result, large numbers of the mamlūks had perished. He then forgave them their misdeeds.²⁸ At this time, he reappointed our author, Ibn Ḥajar, to the office of Shāfi‘ite grand *qādī* (judge) of Egypt because the sultan believed that the plague and his own illness resulted from selling this office to the previous incumbent.²⁹

This belief in men’s suffering and misfortune because of God’s anger at their moral offenses is a very old one and was the preeminent medieval Christian interpretation, based on the Bible as well as on Greek and Roman literature.³⁰

The second chapter of Ibn Ḥajar’s treatise is devoted to the etymology of “plague” (*tā‘ūn*)³¹ and a description of the symptoms of the various forms of plague.³² Ibn Ḥajar and

²⁶ *an-Nujūm*, Popper trans., vol. 18, pp. 146-147. This story appears in Ibn Ḥajar, *Inbā’ al-ghumr*, British Museum MS no. 7321, fol. 332a, and in *as-Sulūk*, part 4, vol. 2, pp. 1031-1033.

²⁷ *Systematic Notes*, vol. 15, p. 22 and map no. 7.

²⁸ *an-Nujūm*, Popper trans., vol. 18, p. 153.

²⁹ Kawash, “Ibn Ḥajar al-‘Asqalānī,” p. 164.

³⁰ Seidel, “Die Lehre von der Kontagion bei den Arabern,” p. 81; Hirst, pp. 6-16; Deaux, *The Black Death 1347*, pp. 8-17, 41; Ziegler, pp. 35-39, 260; Crawford, *Plague and Pestilence*, pp. 22-23; Millard Meiss, *Painting in Florence and Siena after the Black Death* (New York, 1964), pp. 75-78.

³¹ See Appendix 2.

³² *Badhl*, fols. 11b-16b.

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other writers generally made a distinction between plague and other communicable diseases; the latter were referred to as *waba*, “an epidemic” or “a pestilence.”³³

Unlike most of the Muslim and Christian writers on plague in the wake of the Black Death, Ibn Ḥajar attributes the immediate cause of plague almost exclusively to the jinn³⁴ rather than to the corruption of the atmosphere by a miasma; in one form or another, the idea of the miasma was the predominant theory of plague until the late nineteenth century.³⁵ In this instance, Ibn Abī Ḥajalah’s treatise is more representative of the Muslim plague treatises in his presentation of miasma as the chief cause of plague, an ascription he derived from Ibn Sīnā and Ibn an-Nafīs.³⁶ Although Ibn Ḥajar is aware of the atmospheric theory, he is equally conscious of its defects. He reasonably asks why a plague miasma would appear in a place with a healthful climate; why it strikes one house and not its neighbor, or only one member of a household and not another; and why it attacks different parts of the body, unlike other diseases carried by the air.³⁷ The inability of the miasmatic theory to account satisfactorily for spatial irregularity in

³³ See Appendix 2.

³⁴ See *djinn* in Sir Hamilton Gibb and J. H. Kramers, *Shorter Encyclopaedia of Islam* (Leiden, 1953) and *genii* in T. P. Hughes, *A Dictionary of Islam* (London, 1896); Ernst Zbinden, *Die Djinn des Islam und der altorientalische geisterglaube* (Berne, 1953); B. A. Donaldson, *The Wild Rue* (London, 1938), chap. 3; Edward Westermarck, “The Belief in Spirits in Morocco,” *Acta Academiae Aboensis Humaniora*, vol. 1, pp. 1-167. Von Kremer maintains that the idea of the jinn as the vehicle of plague had died out completely and was replaced by the idea of divine retribution in the later Middle Ages (“Ueber die grossen Seuchen,” p. 102). This is clearly erroneous and specifically refuted by Ibn Ḥajar’s discussion of the jinn and the magical practices and beliefs that existed in the later Middle Ages. See also *Daf an-niqmah*, fols. 42a-55a, 71a.

³⁵ *Badhl*, fols. 15a-37a. See Seidel, “Die Lehre von der Kontagion bei den Arabern,” p. 82 for a thirteenth-century example of pestilence being attributed to jinn.

³⁶ *Kitāb at-ṭibb*, fols. 143a, 144b; and *Daf an-niqmah*, fols. 55a-59b.

³⁷ *Badhl*, fol. 15b; see also *Tahṣil*, fols. 59b-63b.

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the distribution of plague has always been the greatest weakness of this ancient hypothesis. Ibn Ḥajar believes that there is no contradiction between his explanation and the physicians' miasmatic interpretation, because both held that the disease is caused by a poisonous matter which excited the blood. However, our author asserts that this was the result of the internal piercing of the jinn. The basic tradition for his interpretation is the report of the Prophet:

The destruction of my people is by the piercing and the plague. It was said: "Oh Prophet of God, this piercing we have known but what is the plague?" He said: "The pricking of your enemies is from the jinn and in everyone it is a martyrdom."³⁸

The significance of the jinn as the agents of plague has ancient precedents in the Near East. Demons were accused of generating plagues in ancient Babylonia: Namtar, demon of pestilences, would periodically emerge from hell and roam the streets at night afflicting men.³⁹ The jinn and their poisonous arrows in Muslim literature—found in pre-Islamic poetry and in the Qur'ān⁴⁰—are paralleled by the angel, in Christian literature and iconography, whose drawn sword is the specific device for striking mankind; its sheathing is the sign of the epidemic's termination.⁴¹ From ancient to modern times, plague has been portrayed in the West by heavenly angels with swords, arrows, or fuming vessels; the iconography is usually derived from Biblical sources, especially David's vision of the angel with a drawn sword stretching over Jerusalem.⁴² In 680, good and evil angels were said to have wandered through the streets of Pavia at night. At the command of the good angel, the evil angel pierced the doors of certain houses

³⁸ *Badhl*, fols. 17a-21b. Ibn Ḥajar examines all the versions and *isnāds* of this "interrupted" *ḥadīth*. See also Ullmann, p. 19.

³⁹ Hirst, p. 1.

⁴⁰ Especially Qur'ān 72; see Zbinden, *Die Djinn des Islam*, pp. 75-96.

⁴¹ Crawford, *Plague and Pestilence*, pp. 10, 19, 91.

⁴² 1 Chron. 21.

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with a spear so that the inhabitants would fall ill of plague and die.⁴³ Similarly, during the siege of Kaffa in 1346, the beleaguered Christians saw the heavenly arrows strike the Mongols and cause the Black Death.

Although Islamic art lacks the vivid artistic representation of plague jinn, Ibn Abī Ḥajalah notes the belief in jinn at the time of a plague epidemic:

In these days [Jumādā II, 764/March-April 1363] the entire story had recurred in dreams of the jinn with lances in their hands with which they pierce mankind. Some people had seen them doing this when they awoke, and more than one had reported this to me.⁴⁴

Ibn al-Khaṭīb speaks of “the sword of the plague” over the people of Andalusia.⁴⁵ Concerning the plague of 864/1459-1460 in Egypt, Ibn Taghrī Birdī states: “Death was sweeping them away and the blessings of God were upon our master Izrā’īl [the angel of death].”⁴⁶

The popular belief in the jinn as the agents of plague is well attested by the common man’s magical practices and tales. One legend relates the story of a peasant of Bilbais, in Lower Egypt, who mysteriously visited the jinn in the underworld, where they were preparing their arrows of plague. He was told that one-third of the inhabitants of Bilbais would be destroyed by plague, but not himself and his family. When he returned to his village, he found that the jinn had inflicted plague on its people, as he had been told.⁴⁷ The same belief in jinn was observed in Morocco at the beginning of this century; the jinn were held responsible for plague and other epidemics because of their shooting poisoned arrows at their victims.⁴⁸

⁴³ Crawford, *Plague and Pestilence*, p. 95.

⁴⁴ *Kitāb at-ṭibb*, fol. 145b. ⁴⁵ *Muqni’at*, fol. 42b.

⁴⁶ *an-Nujūm*, Popper trans., vol. 22, p. 95.

⁴⁷ René Basset, *Mille et un contes, récits de légendes Arabes* (Paris, 1924), vol. 1, pp. 123-125.

⁴⁸ Westermarck, *Ritual and Belief in Morocco* (London, 1926), vol. 1, p. 271.

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The fourth chapter of Ibn Ḥajar's treatise concerns the prohibition against leaving a land that has been stricken by plague or entering a plague-stricken land.⁴⁹ Ibn Ḥajar draws support for this proscription from the story of 'Umar and Abū 'Ubaydah, in spite of the evacuation of the army from 'Amwās. The author disapproves both of the analogy of as-Subkī that flight was justified, as one would flee an enemy or lion he could not face,⁵⁰ and of the analogy of az-Zarkashī⁵¹ that one was justified in fleeing from lepers.⁵² Most of the commentators, however, agreed with Ibn Ḥajar about the prohibition against fleeing; for example, Ibn Abī Ḥajalah states that it was necessary to remain at home, for otherwise the epidemic would only increase in intensity and scope.⁵³ In contrast to the Muslim interdiction, flight was universally counseled by the European Christian tractators.⁵⁴

Subsequently, Ibn Ḥajar presents the orthodox view that there is no infection. Pestilence must be from God alone. Following one tradition, a bedouin asked the Prophet: "Oh Envoy of God, how do you explain that my camels were as healthy as gazelles, and then a mangy camel comes, mixes with them, and makes them mangy?" Rejecting the implied belief in contagion-infection, the Prophet answered: "Who infected the first camel?"⁵⁵ Muḥammad is, furthermore, supposed to have denied the pre-Islamic Arab belief in infection.⁵⁶ The orthodox position is summed up by Ibn Ḥajar in the *ḥadīth*: "No contagion, no augury, no ill omen."⁵⁷

The last chapter of the treatise deals with what is prescribed

⁴⁹ al-Bukhārī, *Le Recueil des traditions mahométanes*, vol. 4, p. 59, no. 1; p. 60, no. 3.

⁵⁰ *Badhl*, fol. 91b.

⁵¹ *Ibid.*, fol. 92a.

⁵² "Flee before the lepers as you flee before the lions" (al-Bukhārī, *Le Recueil des traditions mahométanes*, vol. 4, p. 55).

⁵³ *Daʿ an-niqmah*, fol. 85a.

⁵⁴ Campbell, p. 65.

⁵⁵ *Badhl*, fol. 93b. See al-Bukhārī, *Le Recueil des traditions mahométanes*, vol. 4, p. 55.

⁵⁶ *Badhl*, fol. 101a.

⁵⁷ *Ibid.*, fols. 96a, 101b: *lā 'adwā wa lā ʿirah wa lā hāmāh*. See Ullmann, p. 243, n. 6.

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for the Muslim once plague has occurred.⁵⁸ Ibn Ḥajar advises prayer and repentance, in groups and individually, for the lifting of the epidemic. All the plague treatises recommend prayer and offer formulae for it, particularly specific verses from the Qur’ān. There is some disagreement among the legal schools about the form of the supplicatory prayers. Ibn Ḥajar did not initially approve of the prayer ritual for the raising of plague based on the ritual for rain (*ṣalāt al-istisqā’*), which consisted of fasting and going out into the desert in procession to pray. He considered it an innovation when the ritual took place at the time of the Black Death in Damascus, without any precedent in *ḥadīth*.⁵⁹ Yet during the great plague of 833/1429-1430, Ibn Ḥajar agreed to its legality with the other religious teachers in Egypt.⁶⁰ It became a common practice in Egypt in the fourteenth and fifteenth centuries.⁶¹ In addition, Ibn Ḥajar does not approve of the visions of the Prophet and the recommended prayers that were allegedly received by a number of Muslims during the plague epidemics.⁶²

Ibn Ḥajar then gives a perfunctory list of medical treatments⁶³ and a number of prayer formulae for the afflicted (one of which is remarkably similar to the Lord’s Prayer).⁶⁴ Altogether, he recommends patience,⁶⁵ piety, and the visiting of the sick. Furthermore, Muslims are not to curse one another with plague.⁶⁶ The prohibition seems to indicate simply that it was not an uncommon curse.⁶⁷ In present-day Cairo, one Egyptian may say to another: “kubbah”—“a plague on you,” and the other may reply: “kubbatyn”—“two plague boils on you!”

⁵⁸ *Badhl*, fols. 101b-120a.

⁵⁹ *Ibid.*, fols. 108b-109a, 110a.

⁶⁰ *Ibid.*, fol. 109a.

⁶¹ The ritual is fully described in *as-Sulūk*, part 2, vol. 3, pp. 787-788; *al-Bidāyah*, vol. 14, p. 226; and *Daʿ an-niqmah*, fol. 75b.

⁶² *Badhl*, fols. 110b-111a.

⁶³ *Ibid.*, fols. 113b-114a.

⁶⁴ *Ibid.*, fol. 116a.

⁶⁵ See al-Bukhārī, *Le Recueil des traditions mahométanes*, vol. 4, p. 60, no. 1.

⁶⁶ *Badhl*, fol. 103b.

⁶⁷ For example, see the curse of plague recorded from Tangiers by Westermarck, *Ritual and Belief in Morocco*, vol. 1, p. 481.

MAGICAL BELIEFS AND PRACTICES

In this final chapter of his treatise, Ibn Ḥajar includes a discussion of Shaykh Walī ad-Dīn al-Malawī's essay *Ḥall al-ḥibā'*.⁶⁸ Al-Malawī questions the utility of beseeching God to raise plague and nicely plays the devil's advocate to much of Ibn Ḥajar's academic interpretation of plague. For, as al-Malawī argues, there is an obvious contradiction in praying for the lifting of plague if it is a martyrdom and a mercy from God. Is such prayer not a fleeing from what has been predestined? Is such prayer not opposed to the Prophet's desire for his nation? Although Ibn Ḥajar answers the questions, they legitimately pull his views back to reality.

Another plague treatise quotes al-Ghazzalī's resolution of this theological problem posed by al-Malawī. Al-Ghazzalī, one of the great theologians of Islam (d. 1111), argues that prayer to repulse plague is *part* of what has been predestined by God along with plague itself. He uses the metaphor of an arrow whose head is prayer and whose shaft is the epidemic disease. In other words, even if one accepts divine predestination, he does not go unarmed into battle.⁶⁹

In sum, Ibn Ḥajar's plague treatise is only one example of the many attempts that were made in the wake of the Black Death to harmonize the contradictory *hadīths* concerning plague and infection, which date from the theological discussions of the ninth century, and to provide a thorough religious interpretation of plague for co-religionists.

C. MAGICAL BELIEFS AND PRACTICES

In general, the magical beliefs and practices indicate a common need to supplement or replace inadequate medical knowledge with supernatural devices for protection and relief from plague. These beliefs and practices may be said to be a popular extension of the Muslim religion: in most cases, we find that the incantations and charms are drawn primarily from traditional Islamic sources, as Ibn Ḥajar's treatise demonstrates. The use of magic actually reinforces the contention that religious influence was paramount in any attempt to under-

⁶⁸ *Badhl*, fols. 103b-104a.

⁶⁹ *Ṭāshköprüzāde*, fol. 40b.

MAGICAL BELIEFS AND PRACTICES

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⁶⁸ *Badhl*, fols. 103b-104a.

⁶⁹ *Ṭāshköprüzāde*, fol. 40b.

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stand the nature of plague and combat its effects: God was ultimately responsible for sending the disease and consequently was the only one who could remove it.

Magic played a significant role in the popular response to the Black Death. Similar to the medical discussions of plague, the recommendations of magic in the plague treatises must reflect, to a great extent, the actual practice of many Muslims, regardless of the limited historical observations of its use. Islam had inherited through late Judaism and Christianity that most fateful legacy of Zoroastrian Persia: a belief in the absolute division of the spiritual world between good and evil powers, between angels and demons. We have only to be reminded that the success of early Christianity was due principally to its attacks on men's invisible enemies, the demons, through exorcism and miracles of healing.¹ The spread of Islam, at least initially, cannot be similarly explained, but Islam became intimately associated with popular magical beliefs and practices during the medieval period. To the problem of evil, the Muslim belief in jinn offered an answer designed to relieve nameless anxiety; Muslims focused this anxiety on the jinn, and at the same time Islam offered a remedy for it. Thus, the magical practices directed against plague were not unique phenomena; they were only a part of a vast body of supernatural beliefs and practices that surrounded and sustained men's lives in a hostile world.

The magical beliefs took the form of specific prayers or incantations (which should be said at a certain time and in a certain manner) and magical objects, such as inscriptions and talismans—a Greek word coming into English through Arabic.² Many of these esoteric practices are related to “letter

¹ Peter Brown, *The World of Late Antiquity: A.D. 150-750* (London, 1971), p. 55.

² The only example of an amulet specifically directed against an epidemic, to my knowledge, is one illustrated in Rudolf Kriss and Hubert Kriss-Heinrich, *Volks Glaube im Bereich des Islam* (Wiesbaden, 1960-1962), vol. 2, plate 78 nos. 1A and 1R; description, p. 93. The common use of amulets against plague and other maladies is noted, but no examples are given in M. Reinaud, *Description des monumens musulmans de cabinet de M. Le Duc de Blacas* (Paris, 1828), vol. 1, p. 62.

magic,”³ which is the use of the Arabic language against evil; the sacredness of Arabic and its magical qualities were “early and inseparable properties of writing.”⁴ However, Ibn Khaldūn, who probably witnessed a number of such exorcisms⁵ during the Black Death, gives a salutary warning to whoever wishes to understand letter magic: “It is an unfathomable subject with innumerable problems.”⁶ For this reason, the object of the following discussion is merely to describe a number of the magical instructions related directly to plague, rather than to hazard an interpretation of their meaning.⁷ Again, the value of such description is that it signifies practices that were an important element, together with strictly medical and religious activities, in men’s reaction to plague.

The advocacy of supplicatory prayers with suggested texts and cryptograms is a common feature of many plague treatises for both the prevention and alleviation of plague.⁸ A particularly full exposition of such practices is to be found in the sixteenth-century plague tract, *Majmū‘at ash-shifā’ li-adwiyat*

³ See *EL*²: “Hurūf” (T. Fahd).

⁴ Rosenthal, *Four Essays on Art and Literature in Islam*, p. 53.

⁵ See *EL*²: “Djafir” (T. Fahd).

⁶ *The Muqaddimah*, vol. 3, p. 172. The section on magic and sorcery (vol. 3, pp. 156-226) is an excellent introduction to these occult beliefs both because of its clarity and because it was written during the period immediately following the Black Death. See also Kriss, *Volks Glaube*, especially vol. 2, chap. 2; James Robson, “Magic Cures in Popular Islam,” *Moslem World*, vol. 24 (1934), pp. 33-43 (based primarily on Aḥmad ad-Dayrābī [d. 1151/1738], *Kitāb al-mujarrabāt* [Cairo, n.d.]); Lane, *Arabian Society in the Middle Ages*, pp. 80-96; Ullmann, pp. 251-254, and *Die Natur- und Geheimwissenschaften im Islam* (Leiden, 1972), chap. 6 (the author notes especially on p. 389 the use of amulets to expel plague from inhabited places advocated by ar-Rāzī in his *Kitāb as-sirr al-maḳtūm fī muḳhātabat an-nujūm*).

⁷ Arabic magic has not been adequately studied. Such investigation, in turn, must await the systematic study of pre-Islamic magic, particularly in Egypt the pharaonic magical texts; see J. F. Borghouts, “Magical Texts,” *Textes et Langages de l’Égypte Pharaonique*, IFAO, vol. 64, no. 3 (Cairo, 1972), pp. 7-19.

⁸ I have been unable to see the work by Ibn Kamāl Pāshā, *Rāḥat al-arwāḥ fī da‘f ‘āḥāt al-ashbāḥ*, which is reported to contain a large number of prayers and magical practices (Ullmann, p. 248).

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al-wabā', by Ṭāshköprüzāde.⁹ At the beginning, the author warns the reader that he should not neglect the customary prayers in favor of the specific magical prayers and rituals that the treatise suggests. One should clean one's body and house, give alms, and settle any debts to assist the prayers against the disease. It is advised that a Muslim should repeat the special prayers according to the number of words in the prayer; and if more prayers were needed, the prayer should be repeated according to the number of letters in the prayer. Devotions were best said at dawn and on Friday at suitable places.¹⁰

These prayers and inscriptions frequently employed the divine names of God (*al-asmā' al-ḥusnā'*),¹¹ which have occult properties. Most of the Arabic authors have drawn their information directly from the major work on the magical use of these divine names, *Shams al-ma'āriḥ al-ḳubrā*, by Aḥmad ibn 'Alī al-Būnī (d. ca. 622/1225).¹² Al-Būnī was one of the most important Muslim writers on occult sciences and is still employed by present-day exorcists. He furnishes the forms for magic squares, cabalistic letters, and talismanic signs which may be employed against plague.

An example from al-Būnī's manual may be helpful. Two of the divine names of God, "the Giver of life and death" (*al-mumīt wal-muḥyī*), al-Būnī states are particularly effective in warding off plague.¹³ The two names should be recited or written on a square made of gold, silver, or parchment. The

⁹ Fols. 37b-41b. For a comparable European plague treatise that contains magical remedies, see the dual work on pestilence and poisons in the *Summa* of Antonius Guaynerius, written shortly before 1444 (Thorndike, *The History of Magic*, vol. 4, pp. 215-231).

¹⁰ Ṭāshköprüzāde, fols. 38b-39b.

¹¹ See *El²* (L. Gardet); Kriss, *Volks Glaube*, vol. 2, pp. 68-91; E. W. Lane, *An Account of the Manners and Customs of the Modern Egyptians* (London, 1895), p. 257.

¹² Cairo, n.d. *GAL*, vol. 1, p. 498; Ullmann, p. 249. A later source than al-Būnī for magical practices that was cited in plague treatises was al-Biṣṭāmī (d. 858/1454): *Bahr al-wuqūf fi 'ilm al-ḥurūf*, and *Shams al-āfāq fi 'ilm al-ḥurūf wal-auḳāq* (*GAL*, vol. 2, p. 232, nos. 20 and 21).

¹³ *Shams al-ma'āriḥ al-ḳubrā*, part 4, pp. 74-75.

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author supplies the following cryptogram (Fig. 1), composed of the letters of the two divine names in addition to the prayer which should be recited using God's names.

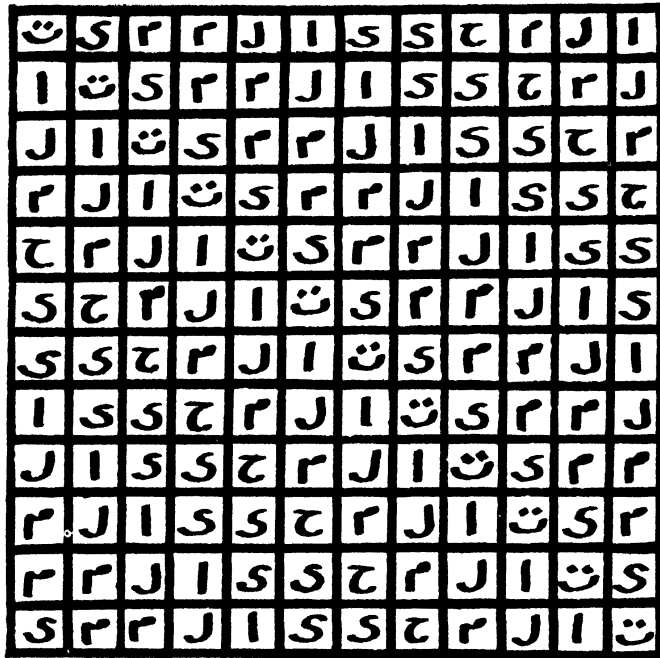


Figure 1.

Most of the recommended prayers in the plague treatises are in the common form of “seeking refuge” (*isti’adhah, iltijā’ah*) with God, based on portions of the Qur’ān, which are felt to be efficacious against disease or hardship.¹⁴ Naturally, the Qur’ān was the primary source for such prayers and magical devices. The basis for the belief that the Qur’ān was itself a cure against illness is given in the Qur’ān: “We send down [verses of] the Qur’ān which is a healing [*shifā’*] and a mercy to the believer.”¹⁵

¹⁴ See Jan Knappert, *Swahili Islamic Poetry* (Leiden, 1971), vol. 1, p. 87, and C. E. Padwick, *Muslim Devotions* (London, 1961), chap. 6.

¹⁵ Qur’ān 17:82.

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A handbook for the appropriate use of short Qur'ānic verses for healing was *ad-Dā' wad-dawā'* by Shams ad-Dīn al-Jauzīyah az-Zar'ī (d. 751/1350).¹⁶ Certain *sūrahs* or chapters of the Qur'ān are specifically mentioned. For example, it was beneficial to read after every obligatory prayer the *sūrat al-iḳhlās*¹⁷ eleven times with enthusiasm and *al-mu'awwidhatayn*¹⁸ and the *sūrat al-kāfirīn*¹⁹ once in the proper succession. Then one was to spit on the palm of his hand and wipe it on his body.²⁰ Ibn Ḥajar recommended reading the verse entitled *al-ḳursī* or "Throne Verse"²¹ in a house for three consecutive nights, to prevent plague from entering. He also advised the repetition of *subḥānallāh* ("Glory to God") in treating plague victims, according to advice from ash-Shāfi'ī.²² Further, six Qur'ānic verses known collectively as the "curative verses" (*āyāt ash-shifā'*) were considered especially effective in warding off sickness or disease.²³ These verses should be recited at the time of a plague epidemic,²⁴ as well as the *sūrat Yūnus*,²⁵ the *sūrat al-an'ām*,²⁶ and particularly the *fātiḥah* or opening verse of the Qur'ān.²⁷

Many of these verses were used for inscriptions on amulets and talismans, besides the divine names. The *fātiḥah* and other verses were highly recommended for being written on the inner surface of earthenware cups and bowls. After water had been placed in the vessel and the verse written in ink had dissolved, the water had magical qualities against plague if it

¹⁶ *GAL*, vol. 2, p. 106; *Supplement*, vol. 2, p. 127.

¹⁷ Qur'ān 112.

¹⁸ The two verses from the Qur'ān 113 and 114: "Say: 'I take refuge with the Lord of the Daybreak,'" and "Say: 'I take refuge with the Lord of the people.'"

¹⁹ Qur'ān 109.

²⁰ Ṭāshköprüzāde, fols. 41b-42a.

²¹ Qur'ān 2:255.

²² *Badhl*, fols. 40a-44b.

²³ Lane, *Manners and Customs*, pp. 260-261.

²⁴ Ṭāshköprüzāde, fol. 41b.

²⁵ Qur'ān 10. Ṭāshköprüzāde, fol. 46b; Ibn Haydūr, *Risālah fī l-am-rād*, fol. 104b.

²⁶ Qur'ān 6. Ṭāshköprüzāde, fol. 43a.

²⁷ Ṭāshköprüzāde, fol. 42b.

were drunk or used for bathing.²⁸ Some of the religious teachers said that when someone wrote the *fātihah* on paper at the hour of Venus and washed it in water and then sprinkled it on the face of the sick, the patient would be cured of the disease.²⁹

Typical of the recommendation of such prayers from the Qur'ān is the advice taken from Shihāb ad-Dīn 'Umar as-Suhrawardī: "I heard that the reading of the *sūrat al-burūj*³⁰ at the noon prayer saves one from the plague boils [*damāmīl*], and whoever recited the *salām* aloud in the time of an epidemic twenty-eight times every day is safe from the plagues."³¹ The complete reading of the Qur'ān itself during a week, beginning on a Friday and ending on the following Thursday, was strongly suggested.³²

A large number of prayers to avert plague were taken from non-Qur'ānic sources. Some were derived from the sayings of the Prophet and his companions, as well as from later scholars and religious men such as ash-Shāfi'ī. It is evident that many of the special prayers originated from specific outbreaks of plague in the period following the Plague of Justinian.³³ The prayer of the Persian *ḥadīth* scholar aṣ-Ṣābūnī, who died of plague in 449/1057, is representative.³⁴ Aṣ-Ṣābūnī saw the Prophet in a dream and complained to him about the disease. God gave him a prayer to recite over water placed in a new cup and instructed him to drink the water when the epidemic occurred.³⁵ A number of similar prayers are reported to be the result of seeing the Prophet in a vision or dream at the time of the Black Death.

A prayer commonly used during the Black Death was the following:

²⁸ *Ibid.*, fol. 42b; see Lane, *Manners and Customs*, pp. 263-264.

²⁹ Tāshköprüzāde, fol. 42b.

³⁰ Qur'ān 85.

³¹ Tāshköprüzāde, fol. 42a.

³² *Ibid.*, fol. 43a.

³³ *Ibid.*, fols. 46b, 50a.

³⁴ *GAL*, vol. 1, p. 362.

³⁵ Tāshköprüzāde, fols. 46b-47a is followed by a large number of prayers (fols. 47a-56b).

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Oh God, allay the fearful stroke of the lord of al-Jabarūt³⁶ by Thy descending kindness which comes from the abundance of heaven, so that we may cling to the coat-tails of Your kindness. We seek refuge with You from the events of Your power. You are the omnipotent and universal power. There is no power and strength save in God Almighty.³⁷

This should be said every day during a plague epidemic. Ibn Haydūr in his plague treatise instructed his reader to write this prayer on strips of paper and attach them to the walls of one's house so that plague would not strike his home.³⁸

Other short prayers usually begin by invoking God by one of His divine names, as was mentioned in the discussion of al-Būnī. These prayers should be repeated a specified number of times every day. For example, whoever said: "The Eternal, there is no destruction and cessation of His kingdom" every day 136 times would be saved from the disease.³⁹ Whoever repeated the various names of God, such as "the Preserving" every day 898 times or "the Vigilant" 312 times, would be safe. If a Muslim were devout and repeated "the Subduer" over the ill 2142 times, plague would depart.⁴⁰ The divine name "the Believer" was considered by some to be the most beneficial during a plague epidemic and should be repeated 136 times a day, but if necessary 299 times a day. Further, it was advisable to put this word into a square and engrave it on a square piece of silver, and the talisman would ward off the evil when it was carried.⁴¹ Likewise, an early eighteenth-century Egyptian plague tract commends the following talismans (Figs. 2 and

³⁶ See *EJ*²: "ālam" (L. Gardet).

³⁷ Tāshköprüzāde, fols. 45b, 46a; Luṭfallāh aṭ-Ṭuqāṭī, *Risālah fī tad'if al-madhbah*, Istanbul MS no. 3596, fol. 8b; *as-Sulūk*, part 2, vol. 3, p. 780; Ibn Haydūr, *Risālah fī l-amrād*, fol. 104a gives a longer version of the same prayer and comments that it is a famous prayer related from the Prophet.

³⁸ *Risālah fī l-amrād*, fol. 104a.

³⁹ Luṭfallāh aṭ-Ṭuqāṭī, *Risālah fī tad'if al-madhbah*, fols. 8b-9a.

⁴⁰ *Ibid.*, fol. 9a.

⁴¹ Tāshköprüzāde, fol. 44a.

يا مقتدر	يا رقيب
يا عظيم	يا خلاق

Figure 2

3) with the names of God; carrying them would guard the wearer against plague. The second (Fig. 3) should be drawn on Tuesday before the noon prayer.⁴²

Other beatific names were used in magical practices. The name “the Healer” (*ash-shāfi*) should be written on a piece of parchment or the skin of a gourd, placed in violet ointment

يا منيئث	يا رقيب
يا عليم	يا خلاق

Figure 3

and then hung in the sun for forty days. At the same time the name should be recited every day 391 times over this ointment. Then, whoever was smeared with the ointment would be safe from plague during the year.⁴³ Another example of using the divine name “the Healer” is a chronogram placed on a square during the second hour of Sunday (Fig. 4):

⁴² as-Saḥalāwī, *Risālah taḥhīr*, p. 4.

⁴³ Tāshköprüzāde, fol. 44a. This treatise gives a large number of divine names with their properties and the manner of using them similar to what has been described above (fols. 44b-45b).

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س	ف	ا	شر
302	3	79	11
78	8	302	3
4	301	9	8

Figure 4

It should be washed away with water and the water given to anyone who was ill with plague.⁴⁴ If one wrote “God is gentle to His servants” (*Allāh laṭīf bi-‘ibādihi*) on a glass cup during the time of prayer, washed it off with water, and gave a *mithqāl* weight of the water to the plague victim to drink, he would be saved (Fig. 5).⁴⁵

Ibn Haydūr relates other magical practices to avert plague by writing various signs and letters on cups, filling them with water, and then drinking the water in which the incantation had been dissolved. For example, the following design (incomplete in the manuscript) should contain twenty *hā*'s and five *hā*'s (Fig. 6):⁴⁶

⁴⁴ *Ibid.*, fol. 45b. In this and subsequent diagrams the original numbers are given in Western “Arabic” numerals.

⁴⁵ *Ibid.*, fol. 47b.

⁴⁶ *Risālah fī l-amrād*, fol. 103a.

الله	لطيف	بعبا	ده
10	74	13	65
127	74	13	77
116	13	63	128

Figure 5

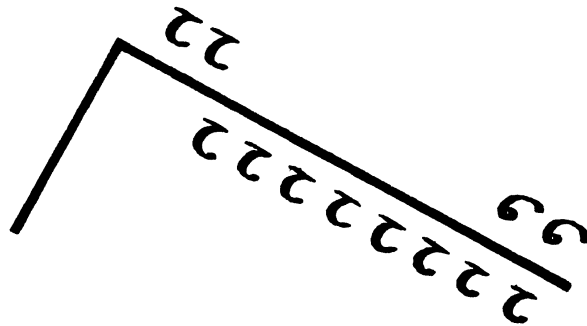


Figure 6

Similarly, the author recommends, during an unspecified epidemic of plague that was then occurring, this triangular form with fourteen *alifs*, seven *hā's*, seven *nūns*, and two *mims* (Fig. 7):⁴⁷

⁴⁷ *Ibid.*, fol. 103b.

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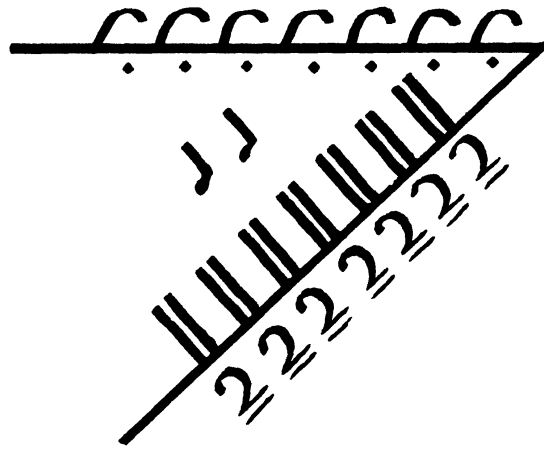


Figure 7

Such incantations were used in still other ways. Frequently a magical sign was made on a piece of bread, and it was swallowed in order to ward off plague.⁴⁸ In other cases, a piece of paper or parchment with the incantation was burned, and the fumes were considered beneficial to inhale.⁴⁹ One plague treatise quotes al-Būnī concerning the two names of God, “the Guardian, the Powerful” (*al-muqtadir, ar-raqīb*). If these two names were engraved on the stone of a ring in this manner:



Figure 8

⁴⁸ al-Jazā'irī, *Kitāb maskīn ash-shujūn fī ḥuḳm al-firār min at-ṭā'ūn*, Berlin MS no. 6377 (Ahlwardt), fol. 149.

⁴⁹ See the description of these practices for various illnesses in M. Galal, “Essai d'observations sur les rites funéraires en Égypte actuelle,” *REI* (1937), pp. 136-145; see also Westermarck, *Ritual and Belief in Morocco*, vol. 1, chap. 5.

(combining the letters of the two names alternatively), plague would not befall the wearer as long as he lived.⁵⁰

The plague treatise of Ibn Haydūr is devoted primarily to these various ways of using the “secrets of letters” in treating plague, in addition to prayers and medical advice. At the beginning of his interesting discussion of letter magic, Ibn Haydūr relates⁵¹ that his teacher informed him that one night in the year 764/1362-1363 he had gone to bed and thought about the epidemic of plague that was rampant in this year. He slept badly because of the distress caused by the epidemic. In his sleep, he saw a man take a small book from his own library and bring it to him. The man laid his hand on the last line on the right side of a page of the book and said: “These names will intercede for you during the epidemic and read them in this manner—‘Oh Living One, Oh Patient One, Oh Loving One, Oh Wise One.’”⁵² Then the shaykh awoke and opened the book he had recognized in the dream and, looking at the last line of every right-hand page, found the passage. When it was morning, he told his friends about the dream. Among them was Ḥājj Rashīd al-Ḥabishī al-Mashriqī,⁵³ who, when he heard the recitation of the names of God in this manner, said that these names were engraved on rings among the people in the East but with the addition of the letter *hā*.⁵⁴ There follow in the manuscript three designs (Figs. 9, 10, & 11) for this engraved inscription. Figs. 10 and 11 differ from Fig. 9 in the juxtaposition of God’s names.

The stone engraved in this way would guard a person against the burning fever that accompanied plague, if he drank

⁵⁰ Luṭfallāh aṭ-Tuqāṭī, *Risālah fī taḍ’īf al-madhbah*, fol. 9a; the same quotation is found in Ṭāshkōprüzāde, fol. 44a.

⁵¹ *Risālah fī l-amrād*, fol. 101b-102b.

⁵² *Yā hayā—yā ḥalīm—yā ḥanān—yā ḥakīm*.

⁵³ He may be identified with the mystic Jamāl ad-Dīn al-Ḥabishī, d. 782/1382 (*GAL*, vol. 2, p. 189).

⁵⁴ The same description of the engraved ring is repeated on fol. 103a of Ibn Haydūr’s treatise.

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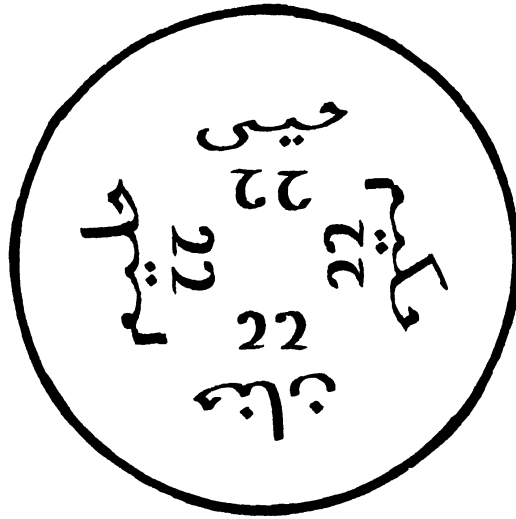


Figure 9

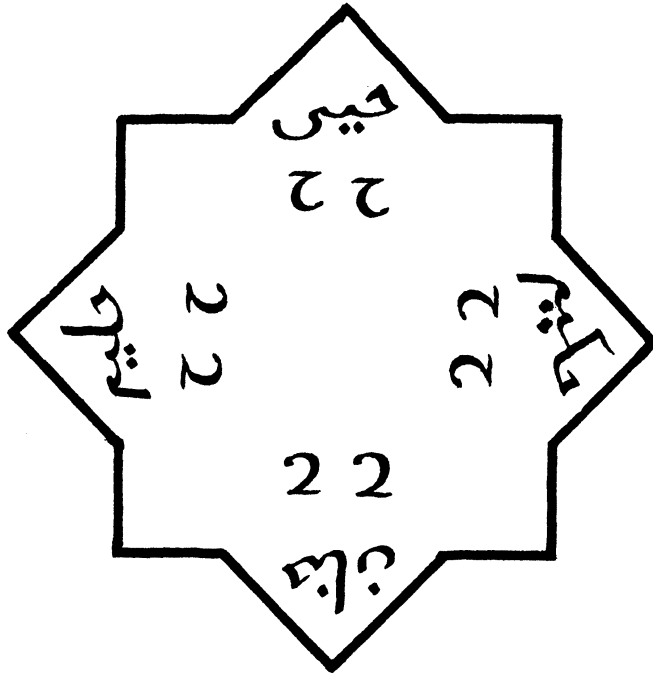


Figure 10

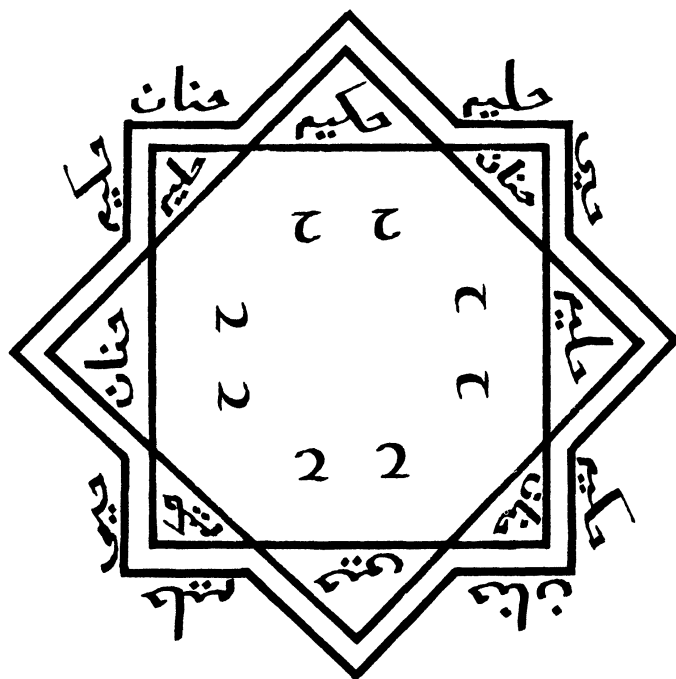


Figure 11

water in which the ring had been submerged. One of the conditions of the seal was that it must not be worn on Saturday or Monday. Ibn Haydūr explains that this was because of the coldness of the two stars, Saturn and the moon, ascribed to these two days. Among other properties of such a ring or the recitation of these names of God was its effectiveness in alleviating the severe heat in the summer and the reduction of sexual powers.⁵⁵

In a similar manner, Ṭāshköprüzāde describes in his plague treatise an engraved ring that warded off plague from its wearer.⁵⁶ Using the name of God, “the Powerful” (*al-muqta-dir*), the ring should be inscribed in the following manner (Fig. 12):

⁵⁵ *Risālah fī l-amrād*, fols. 103a-103b.

⁵⁶ Ṭāshköprüzāde, fols. 44b-45a.

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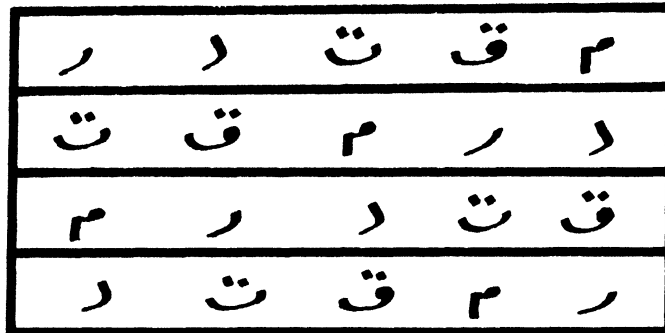


Figure 12

The wearing of a sapphire in a ring or necklace is frequently mentioned as an effective charm against plague. This property of sapphire is usually related on the authority of Plato and Aristotle.⁵⁷ Ibn al-Wardī tells us specifically that rubies were worn to guard against the Black Death in Aleppo.⁵⁸

The Andalusian physician, ash-Shaqūrī, states that if a piece of elephant tusk were hung around the neck of a child, the child would be safe from plague. On the authority of Ibn Zuhri al-Ishbīlī's *Khawāṣṣ al-ḥayawān*,⁵⁹ ash-Shaqūrī asserts that if a piece of the herb doricum were hung inside a house, plague would not befall the inhabitants. And from a work by the famous doctor ar-Rāzī about plague: if a man wore a ring made of mixed fresh myrtle on his little finger, his plague boils would be quieted. Some people claimed that if the herb eryngium were put on the buboes, it would pickle them.⁶⁰

⁵⁷ ash-Shaqūrī, *Taḥqīq an-naba'*, fol. 110b; Ṭāshköprüzāde, fol. 35b. "Of the characteristics of sapphire: whoever puts on a necklace of the stone or puts on a ring of sapphire, it is his protection against the plague's striking him in a land where plague has occurred among others, the nobility, and the leaders of the people." (Shihāb ad-Dīn Abū l-'Abbās at-Tifāshī [d. 651/1253], *Azhār al-afkār fī jawāhir al-ahjār*, Dār al-Kutub al-Miṣriyah microfilm copy of Topkapī Sarī MS, p. 19 [GAL, vol. 1, p. 495]).

⁵⁸ *Risālat an-naba'*, p. 186.

⁵⁹ GAL, vol. 1, p. 486.

⁶⁰ ash-Shaqūrī, *Taḥqīq an-naba'*, fols. 110b-111a.

MAGICAL BELIEFS AND PRACTICES

From al-Būnī's *ʿIlm al-hudā*,⁶¹ there is a recommendation that if a man engraved on the door of his house the beatific names, “the Eternal, the Creator,” no one in the house would die of plague.⁶² Likewise, if “the Life” were written on one’s house eighteen times in the first hour of Friday, the inhabitants of the house would be safe from plague.⁶³ ‘Abd ar-Raḥmān al-Biṣṭāmī (d. 858/1454)⁶⁴ relates from the religious teachers that if God’s name, “the Eternal” (*al-bāqī*), were painted in four squares in the following form (Fig. 13) on the outside of a house or wall, it protected the inhabitants from

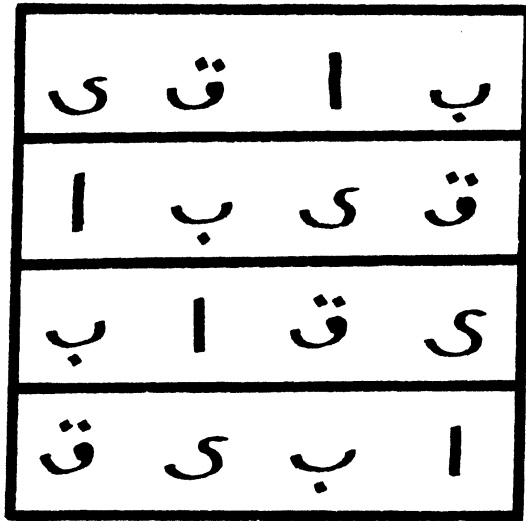


Figure 13

⁶¹ Cited in Ṭāshkōprüzāde, fol. 44a; *GAL*, vol. 1, p. 497, no. 5.

⁶² Luṭfallāh aṭ-Ṭuqātī, *Risālah fī tadʿīf al-madhhab*, fol. 9a.

⁶³ *Ibid.* These practices recall the English custom of painting blue, and later red, crosses on plague-stricken houses and the inscription: “Lord have mercy upon us.” (Shrewsbury, *A History of Bubonic Plague*, p. 204 *et passim.*)

⁶⁴ *GAL*, vol. 2, p. 231.

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plague. It was said that it had been painted on the house of the caliph in Baghdad, and protected him for eighty years.⁶⁵

Like the use of the divine names for magical practice, there were the magical names of the “Seven Sleepers” (*aṣḥāb al-kaḥf*) and their dog, Qītmīr, which could be engraved on a talisman or written on the body.⁶⁶ One plague treatise recommends this cryptogram (Fig. 14):⁶⁷

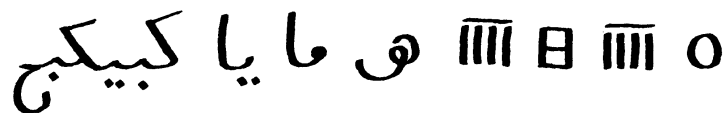


Figure 14

The following set of symbols is found in a plague treatise written during the plague epidemic of 1125/1713-1714 in Egypt (Fig. 15).⁶⁸



Figure 15

Obviously, the cryptograms show a great variety, being composed of words, letters, numbers, symbols, or any combination of these. As in the latter two examples, their symbolism

⁶⁵ Ṭāshköprüzāde, fol. 45a.

⁶⁶ *EI*²: “aṣḥāb al-kaḥf” (R. Paret); Louis Massignon, “Les ‘Sept Dormants’ Apocalypses d’Islam,” *Opera Minora*, vol. 3, pp. 104-180, particularly pp. 146-147. Concerning their use in amulets, see Kriss, *Volks Glaube*, vol. 2, pp. 82-84, and S. Seligmann, “Das Sieben schäfer-Amulett,” *Der Islam*, vol. 5 (1914), pp. 370-388; Lane, *Manners and Customs*, pp. 257-258.

⁶⁷ Ṭāshköprüzāde, fol. 53b. The use of this cryptogram is taken from Ḥāfiẓ ad-Dīn an-Nasafī, d. 710/1310 (*GAL*, vol. 2, p. 196).

⁶⁸ as-Saḥalāwī, *Risālah taṭṭhir*, p. 3.

MAGICAL BELIEFS AND PRACTICES

is often not readily apparent. In some instances, there is a perfect square in which the sum is always the same whether the numbers are added horizontally, vertically, or diagonally, or when any group of four contiguous numbers are added together. For example, the two following “magic squares”⁶⁹ are presented in one plague treatise (Figs. 16 and 17):⁷⁰

406	409	412	398
411	399	405	410
400		407	404
408	403	401	413

414

Figure 16

The instructions state that when the quadrants were completed by the inclusion of the number outside the diagram the square would avert the plague. In the first case, any sequence gives the sum of 1625 and in the second, 1635. These magic quadrants may have been used in numerous ways, but it is certain that they were often inscribed on metal amulets.⁷¹

⁶⁹ See Kriss, *Volks Glaube*, vol. 2, pp. 84ff.

⁷⁰ Luṭfallāh aṭ-Ṭuqāṭī, *Risālah fī tad'if al-madhbah*, fol. 8b.

⁷¹ See examples of this type in Kriss, *Volks Glaube*, vol. 2, plate 79.

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408	411	418	401
414	402	407	412
403		409	406
410	405	406	416

417

Figure 17

Related to such popular prophylaxes may be the unusual story given by as-Suyūṭī (which he took from Ibn Abī d-Dunyā's *Kitāb al-i'tibār*) of two similar reports about the death of Ayyūb, the son of Caliph Sulaymān ibn 'Abd al-Malik, in 98/717. According to one report, Abū l-Abṭāl told Ibn Abī d-Dunyā:

I was sent to 'Abd al-Malik and with me were six loads of musk from Khurāsān. I passed by the house of Ayyūb ibn Sulayman, and I was admitted and walked through the rooms in which all the clothing and carpets were white. I entered another house, and it was yellow and what was within it was the same. I was admitted into a red house, and everything in it was also red. Then, I was admitted to a green house, and all was green inside. When I was with

Ayyūb, who was on the throne, the people overtook me and devoured the musk I had brought. I passed by the house of Ayyūb after seventeen days and, behold, the house was boarded up. I asked what had happened, and they said that plague had struck them.⁷²

There is a similar report of a man who whitewashed his furniture and dyed his muslin yellow in Ibn Abī Ḥajalah's account of the plague during 761/1359-1360.⁷³ These reports may indicate a domestic practice aimed at plague prevention that is not mentioned specifically in the treatises but that may have had a magical significance. The account of Abū l-Abṭāl does, however, attest to the strong demand for scents to improve the pestilential air during a plague epidemic, for musk is a basic ingredient of perfumes.

Among a number of random superstitions associated with plague was the belief that when pigeons roosted in a house, the inhabitants were safe from the plague miasma. The use of *kuhl* (powdered antimony sulfide) was suggested for one's eyes to ward off the evil jinn, who were thought to bring plague. And it was supposed to have been remarked by the Prophet that whoever passed his comb through his eyebrows was safe from plague.⁷⁴

Finally, Evliyā Çelebî, the noted traveler and Ottoman historian, recorded a number of plague epidemics during his lifetime (d. ca. 1093/1682); he states that there once existed in Constantinople a tall column of marble at the present site of the baths of Bāyazīd II (1481-1512). According to popular belief, the column had magical power to prevent plague from entering the capital. Plague was said to have entered Constantinople on the day that Bāyazīd removed this column in order

⁷² *Mā rawāhu l-wā'ūn*, pp. 151-152.

⁷³ *Daḡ' an-niqmah*, fol. 84b.

⁷⁴ *Badhl*, fol. 39b; Ṭāshköprüzāde, fol. 33b. The last belief is reported on the authority of Abū Nu'aym al-Isfahānī (d. 430/1038), probably from his *Tibb an-nabī* (*GAL*, vol. 1, p. 362).

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to build the baths. The first victim of plague was the son of the sultan, and disease had recurred in the city since that day.⁷⁵

In whatever way men viewed the disease and tried to deal with its threat to human life, the Black Death was able to follow its inexorable course. Into a populous and prosperous age, the Black Death introduced a sudden decline in population, succeeded by irregular but continual retardations of population caused by recurrent plague epidemics.

⁷⁵ Quoted in Suhëyl Ünver, "Sur l'histoire de la peste en Turquie," p. 480. See the translation by Hammer-Purgstall, *Narrative of Travels in Europe, Asia and Africa in the Seventeenth Century by Evliya Efendi* (London, 1834, 1968 reprint), p. 18.