

Silent Sources of the History of Epidemics in the Islamic World: Literature on *Ṭā'ūn*/Plague Treatises*

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Abstract

From 1347 onwards, new literature emerged in the Islamic and Western worlds: the *Ṭā'ūn* [Plague] Treatises. The literature in Islamdom was underpinned by three things: (i) Because the first epidemic was a phenomenon that had been experienced since the birth of Islam, *ṭā'ūn* naturally occurred on the agenda of hadith sources, prophetic biography, and historical works. This agenda was reflected in the treatises as discussions around epidemics, particularly plague, as well as the fight against disease in general in a religious and jurisprudential framework. (ii) Works aimed at diagnosing the plague and dealing with various aspects of it tried to explain disease on the basis of Galenic-Avicennian medicine within the framework of miasma theory, thus deriving their basis from this medical paradigm. (iii) Finally, the encounter with such a brutal illness prompted a quest for all possible remedies, including the occultist culture. This background shaped the language and content of the treatises at different levels.

This article first evaluates the modern studies on plague treatises written in the Islamic world. Then, it surveys the Islamic historical sources in order to pin down the meaning they assign to the concepts of *wabā'* [epidemic disease] and *ṭā'ūn* [plague]. Certain medical works that were the resources for medical doctrines and terminology for plague treatises are also evaluated with a focus on these two concepts. Thus, the aim of this survey is to understand the general conception of epidemic disease and plague in the Islamic world before the Black Death (1346-1353). I discuss and analyze the characteristics of the *Ṭā'ūn* literature, which constitutes the main subject of the article and present a database on the literature. While the works from the Mamluk and Ottoman periods constitute a continuous tradition in some respects, Ottoman treatises differ from the Mamluk works in terms of certain features, especially content. Although this study touches on the common aspects of the works from the two periods, it instead analyzes this literature with a focus on points where the two traditions diverge.

Keywords: Epidemic, plague, *Ṭā'ūn*/Plague Treatises, Kalām, Hadith, Islamic Medicine, Mamluk Studies, Ottoman Thought, Ottoman Medicine, Idris Bidlisi, Taşköprüzâde.

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I. Introduction: A Brief Review of the Secondary Literature

My acquaintance with the *Ṭā'ūn* [Plague Treatises] was thanks to the translation of Taşköprüzâde Ahmed Efendi's (d. 968/1561) *Sharḥ al-Akhlâq al-'Aḍdiyya* six years ago. The author directed the reader to his work titled *Risālat al-shifā' li-adwā' al-wabā'* for details on his views on *tawakkul*. In the first stage, I had no idea why a scholar like Taşköprüzâde wrote such a work or what he discussed in it, but my curiosity grew into an intention to prepare a critical edition and translation of this work. After remaining unfulfilled for a while, in 2019, this intention evolved into a project for surveying the literature on *Ṭā'ūn*/Plague treatises, of which *Risālat al-shifā' li-adwā' al-wabā'* is a part. However, this idea did not go beyond a draft, and we finally set out to work with a group of researchers on the critical edition, translation, and Latinization of a series of *Ṭā'ūn* in 2020. As the notes taken from these studies grew larger and with the progress in reading the history of Islamic medicine and Ottoman thought, I found a need to present the literature in question, and this article has emerged.

During these readings, the *Ṭā'ūn* literature written in the history of Islamic culture and science is observed to be an utterly unstudied area. First of all, the number of published Arabic treatises is very small. For example, this literature has prospered in the Islamic world since the beginning of the 16th century, mostly in the Ottoman Empire. However, no critical edition of any Arabic treatise written by Ottoman scholars has been prepared. Despite an academic interest in Turkish works translated from Arabic or works written in Turkish in the Ottoman period, these studies are insufficient when considering the entirety of the literature. While a publication was made about one of the treatises written in Ottoman Turkish, these treatises were also the subject of several thesis studies. After Nükhet Varlık's master's thesis on the analysis and Latinization of one treatise,¹ another treatise was examined in a doctoral thesis.² Aside from the scarcity of theses on treatises and treatise editions, these treatises cannot easily be said to have been used effectively as a source for studying the history of *ṭā'ūn* and epidemics in the Islamic world.

The first modern source I could identify regarding the history of epidemics in the Islamic world was written by Alfred von Kremer (1828-1889). In his *Ueber die grossen seuchen des Orients nach arabischen Quellen*, Kremer focused on the years

- 1 Nükhet Varlık, "The Study of a Plague Treatise *Tevfikâtü'l-Hamidjyye Fi Def'ü'l-Emrâzi'l-Vebâ'iyye*" (MA Thesis, Boğaziçi University, The Institute for Graduate Studies in Social Sciences, 2000).
- 2 Ertuğrul Tan, "XVIII. Yüzyılda Osmanlılarda Vebâ: Örnek Bir Çalışma Olarak Gevrekzâde Hâfız Hasan Efendi'nin *Micennetü't-Tâ'ūn ve'l-vebâ*" İsimli Çalışması", (PhD Thesis, Karadeniz Technical University, Institute of Social Sciences, 2016).

when epidemics had broken out in Islamic history based on Arabic chronicles. In addition, he included the last part of al-Suyūṭī's (d. 911/1505) famous work *Mā Rawāhu al-Wā'ūn fī Akhbār al-Ṭā'ūn* on epidemics in the history of Islam.³ Because al-Suyūṭī compiled information from the works of scholars such as Ibn Abī Ḥajala (d. 776/1375) and Ibn Ḥajar al-ʿAsqalānī (d. 852/1449),⁴ Kremer became one of the first scholars to use these Arabic treatises.

Saying that the first analysis of epidemic diseases and Ṭā'ūn treatises written in Islamic history belongs to Manfred Ullmann, the pioneer of the study of Islamic medical history, would not be amiss. In his monumental work in the field, *Die Medizin im Islam*, Ullmann gave brief information under the title of *The Problem of Contagion and the Plague Treatises* about works from the following names: Qusṭā Ibn Lūqā (d. 300/912-13), Abū Sahl ʿĪsā b. Yaḥyā al-Masiḥī (d. circa 401/1010-11), Ibn Sinā (d. 428/1037), Ibn al-Jazzār (d. 369/979), Ibn Riḍwān, (d. circa 460/1068), Lisān al-Dīn Ibn al-Khaṭīb (d. 776/1374-75), Abū Jaʿfar Aḥmad b. ʿAlī b. Muḥammad b. Khātima al-Anṣārī al-Mari al-Andalusī (d. 770/1369), Abū ʿAbd al-Allah Muḥammad b. ʿAlī al-Lakhmī al-Shakūrī (d. after 776/1374), Ibn Ḥajar al-ʿAsqalānī,⁵ al-Suyūṭī, Ilyās b. Ibrāhīm (Īliya al-Yahūdī) (d. after 918/1512), Idris Bidlisī (d. 926/1520), Ibn Kemāl (d. 940/1534), ʿAbd al-Qāhir al-Tūnusī (d. after 899/1493-94), Taşköprizāde Aḥmed Efendi, Zayn al-Dīn Ibn Nujaym (d. 970/1563), Zayn al-Dīn al-Karmī (d. 1033/1624), and Faṭḥ Allah al-Baylūnī al-Ḥalabī (d. 1042/1632).⁶ The contributions from Michael Dols, a prominent researcher in the history of Islamic medicine and the history of plague, are invaluable and have advanced the research on this literature. In addition to the discussion about the literature in one of the appendices in his *The Black Death in the Middle East*,⁷ Dols also wrote two articles on two treatises from the Mamluk period.⁸ Lawrence Conrad's article, whose title gives the impression

3 Alfred von Kremer, *Ueber die grossen Seuchen des Orients nach arabischen Quellen* (Vienna: In Commission bei Carl Gerold's Sohn, 1880), 78–90.

4 al-Suyūṭī, *Mā rawāhu al-wā'ūn fī akhbār al-ṭā'ūn*, edited by Muhammed Ali al-Bār (Damascus: Dār al-Qalam, 1418/1997), 181–92.

5 Jacqueline Sublet, "La peste prise aux rêtes de la jurisprudence: le traité d'Ibn Ḥajar al-ʿAsqalānī sur la peste", *Studia Islamica* 33 (1971): 141–49.

6 Manfred Ullmann, *Die Medizin im Islam* (Leiden, Köln: Brill, 1970), 242–50.

7 Michael W. Dols, *The Black Death in the Middle East* (Princeton, New Jersey: Princeton University Press, 1977), 320–335.

8 Michael W. Dols, "Ibn Al-Wardī's *Risālah Al-Naba' ʿAn Al-Waba'*, A Translation of a Major Source for the History of the Black Death in the Middle East", *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles*, Ed. Dickran K. Kouymjian (Beirut: American University of Beirut, 1974), 443–455; Michael W. Dols, "Al-Manbijī's 'Report of the Plague': A Treatise on the Plague of 764-65/1362-4 in the Middle East", *The Black Death: The Impact of the Fourteenth-Century Plague*, Ed. Daniel Williman (Binghamton, NY: Center for Medieval and Early Renaissance Studies, State University of New York, 1982), 65–75.

that it is about the genesis of plague-related works, is mostly devoted to the works that mention the early-period plagues and the translations of the relevant chapters from these works.⁹ Daniel Panzac, another scholar working on the history of plague in the Ottoman Empire between 1700-1850, briefly touched on the treatises of Ibn Hajar al-‘Asqalānī and Taşköprizāde, but he relied on Dols in that and did not use the works directly.¹⁰ Suzanne Gigandet published two articles about the works of ‘Abd al-Allah Muḥammad b. ‘Alī al-Lakhmī al-Shakūri (d. after 776/1374), Ibn Haydūr al-Fāsī al-Tādili (d. 816/1413), and Ibn Manzūr al-Qaysī (d. 864/1460) from Andalusia and Maghreb.¹¹

Birsen Bulmuş, who studied the history of plague in the Ottoman Empire covering as long a period as 1300-1838, allocated a separate chapter to Ḥamdān b. ‘Uthmān Khoja al-Jazā’iri (d. 1257-58/1842), an important author in this literature.¹² She also referred occasionally to İlyās b. İbrāhīm, İdris Bidlisi, and Taşköprizāde.¹³ However, she did not offer a comprehensive or satisfactory evaluation of the literature; many plague treatises were not taken into account in the chapters where they could have been functional. Moreover, important factual inaccuracies are found in the study, such as the confusion between members of the Taşköprizāde family. The thesis prepared by Ertuğrul Tan on the treatise of Gevrekzāde Ḥasan Efendi (d. 1216/1801), who was the Chief Physician at the Ottoman Court, similarly does not include a discussion about the genre that the work belongs to¹⁴ apart from a sketchy list of treatises.

Two scholars studying the history of epidemics need to be singled out: Justin Stearns and Nükhet Varlık. In her award-winning successful work, Varlık assessed several Ottoman-period treatises from certain perspectives. This discussion presents the most detailed, in-depth analysis of the treatises and includes highly accurate conclusions.¹⁵ The author’s most important claim about this literature can be said to be the importance of plague treatises as a genre for the medicalization and

9 Lawrence I. Conrad, “Arabic Plague Chronologies and Treatises: Social and Historical Factors in the Formation of a Literary Genre”, *Studia Islamica* 54 (1981): 51–93.

10 Daniel Panzac, *Osmanlı İmparatorluğu’nda Veba (1700-1850)*, translated by Serap Yılmaz (İstanbul: Tarih Vakfı Yurt Yayınları, 1997), 153–61.

11 Suzanne Gigandet, “Trois Maqālāt au sujet des épidémies de peste en Analousie et au Magreb”, *Arabica* 48/3 (2001): 401–7; Suzanne Gigandet, “Trois Maqālāt sur la prévention des épidémies”, *Arabica* 52/2 (2005): 254–93.

12 Birsen Bulmuş, *Plague, Quarantines and Geopolitics in the Ottoman Empire*, (Edinburgh: Edinburgh University Press, 2012), 97–129.

13 Bulmuş, *Plague, Quarantines*, 2–4, 15–29, 69–75, 84–87.

14 Tan, “XVIII. Yüzyılda Osmanlılarda Vebâ”, 55–65.

15 Nükhet Varlık, *Akdeniz Dünyasında ve Osmanlılarda Veba: 1347-1600*, translated by Hazal Yalın (İstanbul: Kitap Yayınevi, 2017), 278–305.

canonization¹⁶ of knowledge about plagues in the Ottoman Empire. Because the aim of the study is not to address the history of treatises, their subject matters, or other characteristics, the author has confined the analysis to the evaluation of a few treatises written in the 16th century, adhering to the time period under investigation. Varlık has also provided an unsystematic list of plague treatises at the end of her doctoral dissertation's unpublished version.¹⁷

In his 2011 book, Stearns deals with the issue of contagions in Islamic and Christian thought with a focus on the Western Mediterranean world, giving special attention to the plague treatises and using them as much as possible in the chapters where he discusses the subject. Making a brief evaluation about the first plague treatises, Stearns's sources used in this section are insufficient, but his discussion on the genesis and development of the literature is quite useful.¹⁸ In one chapter from the last part of the work, the author deals with the treatises written in the Maghreb region. In this part, Stearns lists nine *Ṭā'ūn* treatises and authors from between the 17th-19th centuries, then discusses how, on which sources, and on which arguments the issue of contagion was addressed in these works.¹⁹ In this part, the author also gives special place to Ḥamdān b. 'Uthmān Khoja al-Jazā'irī and his work.²⁰ In his article published six years after this study, Stearns focused on the *Ṭā'ūn* treatise of a very important name from the Ottoman scientific world. "Aversion to places where epidemics have broken out," which is the title of Idrīs Bidlisi's treatise and lies behind its compilation, can be stated as the main motivation of Stearns' article.²¹ As Varlık stated, the results from this discussion would later be seen in the work from Taşköprizade and have not only affected the relevant literature but also the political-legal decisions that were made.²²

16 As will be emphasized later, what the author means by canonization is that the legal authorities implement the views of scholars such as Taşköprizade on some plague-related issues. See Varlık, *Akdeniz Dünyasında ve Osmanlılarda Veba*, 298–305.

17 Nükhet Varlık, "Disease and Empire: A History of Plague Epidemics in the Early Modern Ottoman Empire (1453-1600)" (PhD Thesis, The University of Chicago, 2008), 279–283.

18 Justin Stearns, *Infectious Ideas: Contagion in Premodern Islamic and Christian Thought in the Western Mediterranean* (Baltimore: The Johns Hopkins University Press, 2011), 79–89.

19 Stearns, *Infectious Ideas*, 142–51.

20 Stearns, *Infectious Ideas*, 151–7.

21 Justin Stearns, "Public Health, the State, and Religious Scholarship: Sovereignty in Idris al-Bidlisi's Arguments for Fleeing the Plague", *The Scaffolding of Sovereignty Global and Aesthetic Perspectives on the History of a Concept*, Eds. Zvi Ben-Dor Benite, Stefanos Geroulanos, and Nicole Jerr (New York: Columbia University Press, 2017), 168–185.

22 Varlık, *Akdeniz Dünyasında ve Osmanlılarda Veba*, 300–1, 303–4.

In one of the valuable studies on plague treatises, John Curry analyzed Zayn al-Dīn al-Karmī's treatise.²³ The latest research on this literature was written by M. Melvin-Koushki. Melvin-Koushki introduced the *Risālat al-Shifā li Adwā' al-Wabā'* from Taşköprizāde, briefly examined the author's sources in and views on occult sciences, discussed the use of occult culture in dealing with *ṭā'ūn*, and translated the seventh appendix of the treatise into English.²⁴

Another source where we can find compact information about the plague treatises is the analytical sections of the editions of a few Arabic treatises. As stated above, not many works were published. Two studies can be mentioned that provide information about the treatises in the current publications: Ibn Ḥajar al-ʿAsqalānī's *Badhl al-Mā'ūn fi Faḍl al-Ṭā'ūn*²⁵ and al-Suyūṭī's (d. 911/1505) *Mā Rawāhu al-Wā'ūn fi Akhbār al-Ṭā'ūn*.²⁶ The list of treatises in these studies, the information given on manuscripts, and the references to the sources that have not survived were very useful in preparing the attached list at the end of the current article. However, the researchers who published these works were not interested in the formation of such a genre, the nature of the literature, its main problems, or other questions about the literature. In addition, almost all of the works written in Ottoman Turkish were ignored in these researches. The researchers were also not concerned with the existence of Persian treatises, treatises translated from Arabic, the existence of Latin and European works,²⁷ or whether works had been translated from Latin to Arabic or to Ottoman Turkish. As a result, the inadequacy of lists in these studies and, more importantly, the lack of discussions on the genre of plague treatises stand out as the gaps this article aims to fill. For this purpose, I aim to shed light onto the genesis of the plague treatises as a genre in this article. This requires revealing what the concepts of plague and *ṭā'ūn* have meant in the history of Islamic science and culture.

23 John J. Curry, "Scholars, Sufis, and Disease: Can Muslim Religious Works Offer Us Novel Insights on Plagues and Epidemics in the Medieval and Early Modern World?", *Plague and Contagion in the Islamic Mediterranean*, Ed. Nükhet Varlık (Kalamazoo: Arc Humanities Press, 2017), 27–55.

24 Matthew Melvin-Koushki, "Taşköprizāde on the (Occult) Science of Plague Prevention and Cure", *Nazariyat* 6/2 (Nov 2020): 133–168.

25 Ibn Ḥajar al-ʿAsqalānī, *Badhl al-mā'ūn fi faḍl al-ṭā'ūn*, edited by Aḥmad ʿIsām ʿAbd al-Qadir al-Kātib (Riyadh: Dār al-ʿAsima, 1991), 32–41.

26 al-Suyūṭī, *Mā rawāhu al-wā'ūn*, 81–99.

27 The genre of plague treatises has been the subject of literature in Latin and local languages since 14th century Europe. There are many secondary studies as well as catalogs in this literature. The following studies about treatises written in Europe from the 14th-18th centuries can be examined: Dorothea Waley Singer, "Some Plague Tractates (Fourteenth and Fifteenth Centuries)", *Proceedings of the Royal Society of Medicine* 9 (1916): 159–212; Lori Jones, "Exploring Concepts of Contagion and the Authority of Medical Treatises in 14th-16th Century England" (MA Thesis, University of Ottawa, 2012); Lori Jones, "From Diseased Bodies to Disordered Bodies Politic: Rereading Medical Writing on the Plague in England and France, 14th–18th Centuries" (PhD Thesis, University of Ottawa, 2017).

II. Knowledge About Epidemics and Ṭā'ūn Before the Black Death

A. Epidemics and Ṭā'ūn from a Historian's Perspective

Ṭā'ūn was a heading found within books of medicine before the Black Death. Although treatises are found under such titles as the corruption of air and contagion, the individual works examining ṭā'ūn from medical, theological, and other aspects are products from the post-1347 period. However, many issues discussed in the literature are based on a legacy transferred and interpreted from the previous period. So the following questions are quite meaningful: How were epidemics, plague, and ṭā'ūn defined before 1347 in Islamic history and culture, what was known about them in general, and what was it based on?

(i) During the Plague of Justinian, the waves of which continued in the first years of Islam, Muslims acquired knowledge about the disease itself as a phenomenon. Over the centuries, two areas of theoretical knowledge also evolved to accompany this empirical knowledge. As for the questions the Sahabah had about ṭā'ūn, plague, or deadly epidemics and the emerging agenda, a theoretical dimension emerged with the explanations from the Prophet Muhammad such as what the attitude toward disease should be and how it should be understood. Since the 8th and 9th centuries when hadiths were compiled, the Hadith Compilation has been a source of reference on plague. The presence and significance of the hadiths naturally led the issue to be handled on a religious and legal basis from the beginning of Islamic history. In particular, the risk of contagion, its treatment, and the issues of leaving, escaping or fleeing from the place of disease have always necessitated a theoretical-theological context related to fate (*qadar*). This context has formed a basis that can be consulted and commented on when other diseases and epidemics are in question, as is being experienced today.

(ii) The other theoretical basis for knowledge about Ṭā'ūn was related to the medical aspect of the disease. Although this is the fundamental aspect of the subject, the medical theoretical groundwork emerged at a later time because, as is known, a humoral medicine paradigm had been adopted during the medical translations from Greek and Syriac into Arabic in the 8th and 9th centuries. In this paradigm, diseases were explained in relation to the four humors and the loss of balance among secretions in the body. Adhering to this paradigm, physicians not only viewed plague but also many diseases as phenomena that emerge and spread when air is corrupted. Given that the air of a region as well as its soil and water were seen as the main source of disease in the works translated from Greek medicine, the Arabic medical literature discussed the structure of air, how air gets corrupted, and how the corrupted air

causes diseases since early times and viewed miasma theory (i.e., corruption of air [*ta'affun al-hawā'*]) as the source of many fever illnesses and epidemics including *ṭā'ūn*. Disease is more widely accepted as being caused by inhalation of airborne toxins. Earthquakes, some events in the atmosphere, or changes in the positions of observable celestial bodies were able to also be counted as signs of corrupted air and the spread of its poison. These models and explanations about *ṭā'ūn*, which is called *veba* in Turkish today, remained valid until the end of the 19th century when the science of bacteriology became widespread.

(iii) Apart from these two sources, another religious and cultural element has come into play over the centuries, especially in dealing with disease. Islam accepts prevention or treatment (*ruqya*) by reading verses from the Qur'an and prayers against diseases that result from physical and spiritual problems. At the same time, treatment obtained by reading other sources was also available as a religious and cultural element in the geographies where Islam had spread. The same practice had a precedent among Arabs in the pre-Islamic period. The practices in question and information about it also found application against plague. The quasi-impossibility of treating the *ṭā'ūn*/plague, especially by means of the current medical paradigm, facilitated the circulation and prevalence of a religious and occult source in dealing with the disease. This culture was referred to as a necessity in the plague treatises. And as a result, we can say that the phenomenon of plague has been discussed around these three axes as the literature grew.

How did epidemics influence knowledge about plague in Islamic culture before the Black Death? This relationship can partially be traced from Hadith sources for the period in question, partially because due to the formative process of the Hadith literature, the relevant hadiths entered these sources, especially the *Kitāb al-Ṭibb* [Book of Medicine] chapters, in the 9th, 10th, and even 11th centuries. As these sources are more concerned with recording the narratives from the 7th century, getting a complete idea about the epidemics that had occurred since the 8th century is not possible, nor the positions taken against them. In this respect, the epidemic records in Islamic historical sources, which provide annual information, are very functional in creating a database, as they mention the dates on which the diseases occurred.²⁸ In fact, in the *Ṭā'ūn* treatises, under the heading *al-Ṭawā'in fi-l-Islām* [Plagues in the history of Islam], epidemics of *ṭā'ūn* that took place from the time of the Prophet

28 For example, al-Ṭabarī mentions a more severe *ṭā'ūn* to have taken place in 114/732-33 in Wāsiṭ, in Damascus in 115/733-34, and in Iraq and Damascus in 116/734-35. See al-Ṭabarī, *Tārīkh al-umam wa-l-mulūk* (Beirut: Dār al-Kutub al-'Ilmiyya, 1407), VII, 90, 92-93.

until around 150 Hijri are listed.²⁹ However, these titles in the *Ṭā'ūn* treatises do not provide any information about the period between the 8th-13th centuries. Historical sources on this rather uncertain period make for important references because many examples are found showing that epidemics (i.e., *ṭā'ūn*) had been recorded in these sources since the 9th century. I will cite Muḥammad b. Jarir al-Ṭabarī (d. 310/923) and Abū al-Faraj Ibn al-Jawzī (d. 597/1201), who gave very detailed information here as an early reference containing some examples between 150-300 Hijri. Al-Ṭabarī stated the plague that had struck people around the Tigris in 258/871-872 to have claimed the lives of many people in Baghdad, Samarra, Wāsiṭ, and elsewhere.³⁰ He noted a plague epidemic to have occurred in Azerbaijan in 288/900-901 where no one was around to bury the dead and the corpses remained on the roads.³¹ Abū al-Faraj Ibn al-Jawzī, who is a source after al-Ṭabarī, presented the epidemic of 258/871-72 a little differently. He stated more than 20,000 people to have died in the plague epidemic in Ahwāz in Southwestern Iran and also in Baghdad.³²

In the sources, records of plague or *ṭā'ūn* epidemics are also mentioned between 900 and 1300. Ibn al-Jawzī³³ and similar sources who briefly mentioned the epidemic of 324/935-936 talked about more severe epidemics a century later. *Ṭabaqāt* author Ibn Abī Uṣaybi'a (d. 668/1269) talked two plagues in Egypt, mentioning one in the entry on Ibn al-Buṭlān (d. 458/1066) in 445/1053-54 and the other in the entry on Ibn Rūḍwān in 447/1055-6.³⁴ Another plague epidemic that sources referred to as being very severe was the major disaster in 478/1085-86. Ibn al-Jawzī gives very detailed information about this epidemic. The epidemic, which had started in Baghdad and claimed the lives of thousands of people in a short time, spread to

29 Works such as Ibn Qutayba's (d. 276/889) *al-Ma'ārif* that give a special headings to the subject are the source of such titles. See Ibn Qutayba, *al-Ma'ārif*, Ed. Sarva Ukkāsha (Cairo: al-Hay'at al-Miṣriyya al-Āmme, 1413/1992), 601–2. Nawawī (d. 676/1277), referring to this work of Ibn Qutayba, became one of the sources that carried this heading to the following centuries. See Nawawī, *al-Adhkār* (Beirut: Dār-i Ibn Hazm, 1425/2004), 275–6.

30 al-Ṭabarī, *Tārīkh al-umam*, IX, 495.

31 al-Ṭabarī, *Tārīkh al-umam*, X, 83.

ثم دخلت سنة ثمان وثلاثين ومائتين، ذكر الخبر عما كان فيه من الأحداث. فمن ذلك ما كان من ورود الخبر على السلطان فيما ذكر بوقوع الوباء بأذربيجان فمات منه خلق كثير إلى أن فقد الناس ما يكتفون به الموتى فكفنا في الأكسية والبلود ثم صاروا إلى أن لم يجدوا من يدفن الموتى فكانوا يتركونهم مطروحين في الطرقات.

32 Abū al-Faraj Ibn al-Jawzī, *al-Muntaẓam fī tārikh al-mulūk wa-l-umam*, edited by Muḥammad 'Abd al-Qadir Aṭā and Muṣṭafā 'Abd al-Qadir Aṭā (Beirut: Dār al-Kutub al-'Ilmiyya, 1412/1992), XII, 136.

وظهر بالأهواز والعراق وباء، وانتشر ذلك إلى حدود فيد، وكان كل يوم يموت ببغداد خمسمائة إلى ستمائة، وكانت هدايات كثيرة بالبصرة تساقط منها أكثر المدينة، ومات منها أكثر من عشرين ألف إنسان.

33 Ibn al-Jawzī, *al-Muntaẓam*, XIII, 357.

34 Ibn Abī Uṣaybi'a, *'Uyūn al-anbā' fī tabaqāt al-aṭibbā'*, edited by Nizār Rūḍā (Beirut: Menshūrātu Dār al-Maktabat al-Ḥayāt, n.d.), 327, 563.

Khorasan, Damascus, and Hejaz and showed the same effect there. Ibn al-Jawzī stated that those who died had to wait for a day or even two without being washed or removed. Meanwhile, physicians could not overcome the disease by trying to deal with it using different foods and treatments. Ibn al-Jawzī also included information such as how the disease progresses, what symptoms it shows, and how long until it results in death. Other information mentioned here is that the state had intervened in the process at the highest level. In the face of this destruction that occurred in the 11th year of his caliphate, the Abbasid caliph al-Muqtadi bi-amr Allah (1075-1094) mobilized a response by distributing medicine and money to the people.³⁵ The situation described in the relevant part is very similar to those presented by the writers of the 14th century Mamluk plague treatises and by the authors of the 16th century Ottoman plague treatises; the *ṭāʿūn* described there may possibly be a plague epidemic as is known today. Apart from these, records also exist showing that epidemics had been ongoing in the 7th century. Ibn Abī Uṣaybiʿa spoke of a *wabāʾ ʿaẓīm* [great epidemic] that had started in Cairo in 612/1215-16 of which the Ayyubid ruler al-Malik al-Kāmil (r. 1218-1238) had also contracted. Another report in the same source is dated 616/1219-20.³⁶ I've shared and evaluated a small number of representative samples found in sources here. I can state that other data will be able to be reached when more sources are surveyed. Because my aim is not to extract data on all epidemic diseases in these centuries but to show the knowledge and perceptions of plague as accurately as possible, I believe the examples I have presented to be sufficient.

Looking critically at the resources to be used is necessary when studying the history of epidemics in the Islamic world. Usefulness is had in reading al-Ṭabarī, Ibn al-Jawzī, and other works with caution, especially in terms of naming diseases and discussing what they mean by concepts such as plague. As can be seen in the next section, epidemic diseases, fever diseases that cause epidemics, and epidemics and fatal diseases in the medical paradigm inherited from the Greeks were generally referred to as plague and *ṭāʿūn* in Arabic medical works. This catch-all meaning is also seen in historical sources. When al-Ṭabarī used the term plague for the epidemic in Baghdad in 301/913-4, he mentioned two types, one having a lighter effect the other he called *al-māsara* [deadly plague].³⁷ Abū ʿAbd Allah al-Tamīmī, who died approximately

35 Ibn al-Jawzī, *al-Muntaẓam*, XVI, 240.

36 Ibn Abī Uṣaybiʿa, *ʿUyūn al-anbāʾ*, 730, 741.

37 al-Ṭabarī, *Tārīkh al-umam*, V, 677.

ثم دخلت سنة إحدى وثلاثمائة، ذكر الخبر عما كان فيها من الأحداث: وفيها كثر أيضا الوباء ببغداد فكان بها منه نوع سموه حينئذ ومنه نوع سموه الماسرا فأما الحنين فكانت سليمة وأما الماسرا فكانت طاعونا قتالة.

60 years after Tabari (d. after 370/980), defined *al-māsara* (also called *al-māshara*) as a *ḥilgāmūnī* [phlegm] disease, namely a disease caused by the combination of burning, corrupted, and deteriorated blood and bile. This disease appears as bloody boils in different parts of the body and can eventually cause death.³⁸ Therefore, the words plague and even *ṭā'ūn* in this example are not used exactly to mean plague. Ibn al-Jawzī, who narrated the same phenomenon, used the term of blood diseases instead of plague in al-Ṭabari.³⁹ As a matter of fact, in several anecdotes that Ibn Abī Uṣaybi'a narrated from the pre-Christian, the pre-Galen, and near Galen periods, he probably used the Arabic word *wabā'* [plague] to mean epidemic or fever disease.⁴⁰

These examples are showing that plague in Arabic is an umbrella concept used for epidemic disease (*marad' āmm*) or fatal epidemics with fever (*al-ḥummayāt al-radī'a al-wabā'iyya*) that can progress very differently and can be deadly depending on the place where they occur. This usage was known when the first Arabic medical works were written. When looking at the definition of plague made in *Kitāb al-'Ayn* by Khalil b. Aḥmad (d. 175/791), who was one of the pioneers of Arabic dictionaries, no obstacle occurs in believing that this usage goes back to the mid-8th century or possibly even earlier. Khalil b. Aḥmad defined plague as “Ṭā'ūn as well as all epidemic diseases.”⁴¹

When looking at the information contained in the cited historical sources, an ambiguous photo about the perception of plague emerges. For this reason, reading the places where the words plague and *ṭā'ūn* are mentioned in these sources would be appropriate by questioning and considering that these may be other epidemics. Meanwhile, some epidemics were mentioned in 13th century sources. The thesis put forward by Monica H. Green about counting the epidemic waves of this century as a *ṭā'ūn* pandemic independent of the Black Death that started in 1347 compels me to change my current assumptions.⁴²

38 Muḥammad b. Aḥmad al-Tamīmī, *Māddat al-baqā' fi iṣlāḥ fasād al-hawā' wa-l-taḥarruz min ḍarar al-awbā'*, edited by Yahyā Sha'ar (Cairo: Ma'had al-Makhtūtāt al-'Arabiyya, 1999/1420), 359–360.

39 Ibn al-Jawzī, *al-Muntaẓam*, XIII, 141.

ثم دخلت سنة إحدى وثلاثمائة فمن الحوادث فيها: كثرت الأمراض الدموية بالناس ببغداد، وكان ذلك في آخر تموز [وآب] وكان من ذلك المرض نوع سموه الماشري، وكان طاعونا قاتلا.

40 Ibn Abi Uṣaybi'a, *'Uyūn al-anbā'*, 47, 114, 115.

41 Khalil b. Aḥmad, *Kitāb al-'Ayn*, edited by Mahdī al-Makhzūmī, Ibrāhīm al-Sāmīrāī (Beirut: Maktabat al-Hilāl, 1988), VIII, 418.

وبأ: الوباء، مهموز: الطاعون، وهو أيضاً كل مَرَضٍ عامٍّ.

42 Monica H. Green, “The Four Black Deaths”, *American Historical Review* 125 (2020): 1601–31.

B. Epidemic, Plague, and Ṭā'ūn Through the Eyes of Physicians Before the Black Death

Lawrence Conrad is a medical historian who stands out with his discussion and suggestions on concepts for plague and ṭā'ūn in the earliest Arabic medicine, history, and lexical sources. Conrad stated the epidemic meaning of plague to stand out, yet ambiguities surround the concepts of ṭā'ūn and plague in Arabic classical sources as well as Western languages.⁴³ Some prominent terms are found for epidemic in the works translated from Greek into Arabic and the subsequent medical literature. Having a great interest in the Galenic corpus, Ḥunayn b. Ishaq (d. 260/873) translated works including Galen's commentary on *Epidemia* by Hippocrates, thus providing an important reference for these terms. In Ḥunayn's translation, epidemic diseases (*al-amrāḍ al-āmmiyya*) are always divided into two: endemic diseases (*marāḍ baladī*) that are specific to a city or a small region and epidemic diseases that occur in a wider area at a certain period of time. Ḥunayn chose the word *al-wāfiḍa* [what befalls people] for epidemic.⁴⁴ What distinguishes epidemics from other diseases are the factors that cause the disease. Although epidemics have other causes, Hippocrates and Galen accepted the reason to mostly be the air that people breathe.⁴⁵ Another fatal type occurs among endemic diseases, for which Ḥunayn b. Ishaq used the word *mawtān*. This type of deadly endemic also mostly originates from air, just like epidemics.⁴⁶

Bubonic plague likely entered the literature in the early 6th century. Bubonic (βουβων in Greek for swelling, lump) was referred to in Arabic medical translations in later centuries with *waram* [lump], *kurha* [boil], and *khurāj* [bulge]. A passage in *Aphorismes* mentioned malignant swelling accompanied by intermittent fever. Here, swelling is translated in Arabic sources as swelling of the lymph nodes in the groin and similar areas.⁴⁷ Bubonic plague, for which *sharuta* was used in 6th century Syriac sources,⁴⁸ and its symptoms were described by Aaron of Alexandria (ca. 6th-7th centuries),⁴⁹ were explicitly cited in Islamic medical texts.

[Text 1] أهرن: الطواعين ورم حارّ يعرض في الأربيات والإبط ويقتل في أربعة أيام أو خمسة، والطاعون الرّديء أسود، والطاعون الأحمر أقل شراً على أنه ربما قتل، ولا يكاد ينجو من الأسود والأخضر أحد.

43 Lawrence I. Conrad, "Ṭā'ūn and Wabā': Conceptions of Plague and Pestilence in Early Islam", *Journal of the Economic and Social History of the Orient* 25/3 (1982): 270–272.

44 Galen, *Commentary on Hippocrates' Epidemics Book I Parts I-III: Edition of the Arabic Version with English Translation and Notes*, ed. Uwe Vagelpohl (Berlin: Walter De Gruyter, 2014), 68.

45 Galen, *Commentary on Hippocrates'*, 70.

46 Galen, *Commentary on Hippocrates'*, 82, 84.

47 Conrad, "Ṭā'ūn and Wabā'", 291–2.

48 Conrad, "Ṭā'ūn and Wabā'", 305.

49 Conrad, "Ṭā'ūn and Wabā'", 294.

Text 1 Translation. Aaron [said]: Ṭā'ūn are feverish swellings in the groin and armpit that are deadly within four to five days. The deadly ṭā'ūn is the black one. Although the red one has less damage, it can also be deadly. Hardly anyone survives the black or green ones.⁵⁰

In his annotated translation of *Glaucōn* in which Galen dealt with fevers and inflammations, Ḥunayn b. Iṣḥāq defined ṭā'ūn as the infectious disease caused by the bacteria *yersinia pestis*). While Ṭā'ūn causes symptoms in two parts of the body according to Aaron of Alexandria, it is a feverish disease defined as swelling in lymph nodes (*al-laḥīm al-rahv*) in three parts according to Ḥunayn's text. The body is trying to protect the brain, the heart, and the liver by means of swelling the lymph nodes behind the ear, in the armpits, and in the groin, respectively, thus preventing the poison from reaching these organs.⁵¹

Apart from the translation and commentary literature, physicians are also found who had dealt with the concept of plague in separate chapters in their works, as well as in independent works with this concept in their titles. Such examples have emerged since the mid-9th century. As far as I can see, the earliest works in the literature using this name belong to Kindī. Neither of the philosopher's two treatises mentioned in Ibn Abī Uṣaybi'a's list have survived. The name of the first of these treatises is رسالة في الأبخرة المصلحة للجو من الأوباء. [On Vapors Purifying the Air from Plagues]. Associating the second treatise titled رسالة في إيضاح العلة في السائم القاتلة السائبة وهو على المقال المطلق الوباء [On Explaining the Cause of the Deadly Celestial Poisons] with deadly epidemics (*wabā'*) would not have been possible were it not for the explanatory information attached to the title. Additional information is found in the work's introduction as "This has been said about the plague in general."⁵² What can be understood from the titles of Kindī's works is that the disease is transmitted by air and becomes fatal with poisons that occur in the air. As far as is known, Kindī's work has not survived, but some information can be gleaned about the content of the treatise thanks to the citations made by Abū 'Abd Allah al-Tamīmī, who wrote a work on the same subject. These citations do not mention Kindī's definition of ṭā'ūn or the use of the term plague in this sense.⁵³

The philosopher and physician Abū Bakr al-Rāzī, who had his own works on certain diseases, also wrote a treatise on the deadly poisons that occur in the air. The work

50 Abū Bakr al-Rāzī, *al-Ḥāwī fi-l-ṭibb*, edited by Heysem Halife Tuaymī (Beirut: Dāru Iḥyā al-Turās al-'Arabī, 1422/2002), V, 8.

51 Ḥunayn b. Iṣḥāq, *Kitāb Jālinūs ilā ghalwaqan fi-l-ta'attī li shifā' al-amrād*, edited by Muḥammad Selim Sālim ([Cairo]: al-Hay'at al-Miṣriyya al-Āmma li al-Kitāb, 1982), 376.

52 Ibn Abī Uṣaybi'a, 'Uyūn al-anbā', 291.

53 al-Tamīmī, *Māddat al-baqā'*, 84, 151.

مقالة في السبب في قتل ريح السموم لأكثر الحيوان [On the Cause of Wind That Is Deadly to Many Living Beings] occurs in Ibn Abi Uṣaybi‘a’s⁵⁴ book *السمو من الوحي من السموم التي هي أسرع من السموم* [On the Cause of Death Which is Faster than Poison].⁵⁵ Although nothing can be said about its content due to the work not having survived, a guess may be possible based on al-Rāzī’s chapters on *fi-l-ḥummayāt* (fevers) in *al-Ḥāwī fi-l-Ṭibb*. al-Rāzī’s *al-Ḥāwī fi-l-Ṭibb* includes the summary of the medical literature translated into Arabic, especially the Hippocrates and Galen corpus, as well as the works written before him in his chapter on fevers, which he dealt with at great length. From this point of view, even if I only examine this work for the concept of plague, how the concept was met in the medical paradigm of the period can be understood. The concept of *fi-l-ḥummayāt al-wabā’iyya* [feverish plagues], which is very briefly described here, shows that plague is not directly taken in the sense of *ṭā’ūn*. Al-Rāzī described the *ṭā’ūn* as it occurred in Ḥunayn with reference to Aaron of Alexandria.⁵⁶

The relationship between *ṭā’ūn* and the plague was discussed in the sources in this period. Known as Ibn Sīnā’s teacher,⁵⁷ Abū Maṣṣūr Ḥasan b. Nuḥ al-Qumrī (d. 398/1008) said in *al-Tanwīr fi-l-Isṭilāḥāt al-Ṭibbiyya*,⁵⁸ which is considered one of the earliest medical dictionaries, that plague is not mentioned without qualifications, as is the common use, but rather with the qualification of feverish plague. According to al-Qumrī’s definition, the feverish plague (حمى الوباء) is the fever that occurs as a result of the reasons for the corruption of air.⁵⁹ The physician’s usage confirm this term to have been quite common in medical texts and to have had a more general meaning than *ṭā’ūn*; as such, the plague in historical works does not directly mean *ṭā’ūn*. Explanations in medical books even serve as a guide for how to understand the situations that cause confusion and are described in historical works about epidemics. Al-Qumrī described *ṭā’ūn* in a way that would be known for centuries afterwards apart from its general meaning as an epidemic. “*Ṭā’ūn* [means] tumors and swellings that appear as excessively inflamed in the body and turn green or darken at a certain stage, and bring troubles and stenosis.”⁶⁰

The treatise of Abū Ja‘far Aḥmad b. Ibrāhīm b. Abi Khālīd al-Jazzār (d. 369/979) is a very interesting work in that it focuses on why plague or epidemics are seen in Egypt.

54 Ibn Abi Uṣaybi‘a, ‘*Uyūn al-anbā’*, 422.

55 Mahmut Kaya, “Ebū Bekir er-Rāzī’nin Hayatı, Eserleri ve Felsefesi”, *Felsefe Risâleleri*, Ebū Bekir er-Râzî, Ed. Mahmut Kaya (İstanbul: Türkiye Yazma Eserler Kurumu Başkanlığı Yayınları, 2016), 51.

56 Abū Bakr al-Rāzī, *al-Ḥāwī*, V, 8.

57 Ibn Abi Uṣaybi‘a, ‘*Uyūn al-anbā’*, 435–6.

58 Ullmann, *Die Medizin*, 147, 236.

59 Abū Maṣṣūr Ḥasan b. Nuḥ al-Qumrī, *al-Tanwīr fi-l-Isṭilāḥāt al-Ṭibbiyya*, edited by Gāde Ḥasan al-Karmī (Riyadh: Maktabat al-Tarbiyat al-‘Arabiyya li-Duvali al-Khalij, 1411/1991), 67.

60 al-Qumrī, *al-Tanwīr*, 65.

الطاعون: أوران و بثور يخرج معه تلهب شديد مجاوز المقدار ويصير حوله أخضر أو أسود ويكون اضطراب و خفقان.

With the long title كتاب في نعت الأسباب المولدة للوباء في مصر وطريق الحيلة في دفع ذلك وعلاج ما يتخوف منه [On Explaining the Causes of Epidemics (Plague) in Egypt, the Solution to Eliminate It and the Treatment of the Worrisome Thing],⁶¹ the treatise was a resource consulted by physicians. Al-Tamīmī, another author who wrote on the epidemic in Egypt, quoted Ibn al-Jazzār's إصلاح فساد الهواء [Refreshing the Corrupted Air]. This work may possibly be the same as the one mentioned by Ibn Abi Uṣaybi'a. Al-Tamīmī includes the term ṭā'ūn while explaining that skencebīn [a mixture of honey and vinegar] from Ibn al-Jazzār helps people recover from deadly diseases and ṭā'ūn. Dry humors may benefit if they use this drug during times of plague and in case of dangerous blood and bile diseases.⁶² Al-Tamīmī's مادة البقاء في إصلاح فساد الهواء والتحرز من ضرر الأوباء [Survival Guide for Refreshing the Corrupted Air and Protection from the Harm of Plagues] is a very important work that compiles previous main sources and quotes applications and treatments in various diseases while also conveying the author's own experiences and observations. Al-Tamīmī dedicated his work to the Fatimid vizier of Jewish origin, Abū al-Faraj Ibn Kilis (d. 380/991).⁶³ Al-Tamīmī wrote a relatively long introduction about the reason for authoring the work. Al-Tamīmī, who examined physicians' attitudes on places with bad air and therefore high prevalence of disease, as well as the cycles of the seasons when sometimes fatal diseases and destructive ṭā'ūn occur. He stated that no in-depth study had occurred among the writers of the ancient or Islamic period apart from Hippocrates' works *On Airs, Waters and Soils* and *On Epidemics*. Al-Tamīmī considered Egypt, Damascus, Baghdad, Basra, Ahwāz, Persia, Oman, Siraf, and Aden as places where the air had corrupted for various reasons. Contamination of the environment for different reasons causes corruption of the air; because of these bad conditions, water and food are affected by miasma. Those who breathe such bad air and those who take putrid water and food are exposed to epidemics, fever, and deadly diseases.⁶⁴ The author was seen to have used the words plague and ṭā'ūn many times in the section on his reason for writing the work and in places throughout it. Looking at these usages, the word plague can be said to have a meaning that includes many feverish and epidemic diseases and to include the diseases that had occurred in Islamic periods and sometimes even pre-Christian. For example, he wrote in one chapter that Rufus of Ephesus had prepared a drug that protects from the effects of corrupted air and eliminates feverish illnesses, however he said that people deceive themselves by considering they are healthy and safe from deadly diseases and not

61 Ibn Abi Uṣaybi'a, 'Uyūn al-anbā', 482.

62 al-Tamimi, *Māddat al-baqā'*, 414.

63 al-Tamimi, *Māddat al-baqā'*, 79–81.

64 al-Tamimi, *Māddat al-baqā'*, 81–3.

drink this drug. Kindī, quoting Galen in *Aqrābādhīn*, mentioned *gil-i Ermeni/al-ṭīn al-Armanī* [theriac and Armenian clay] to offer protection from diseases. In fact, in one epidemic in Anatolia (*fi-l-wabā' allazi kāna bi-Rūmiye*), a few people who took this drug died while all those who took it before the epidemic survived. Also, al-Tamīmī mentioned the benefits of theriac when the person is healthy and when the air is in favorable conditions and its feature that cures *ṭā'ūn* and epidemic diseases in the case of corruption of the air, (*'inde fasād al-hawāi wa nushū' al-ṭawā'in wa-l-amrāq al-'āmmiya*).⁶⁵

When considering the written works, Egypt must come first among the places where the people frequently suffer from physical diseases due to the corruption of the air.⁶⁶ Approximately a century after al-Tamīmī, another physician, Ibn Rīḍwān, wrote a monograph on Egypt. This work was intended to reject Ibn al-Jazzār's work, who claimed that Egypt was a very unhealthy region. Essentially, Ibn Rīḍwān agreed with Ibn al-Jazzār's conclusion. However, according to him, Ibn al-Jazzār reached the right conclusion for the wrong reasons and did not fully grasp the emergence of the disease in Egypt.⁶⁷ Ibn Rīḍwān emphasized the reason to be not the inherent characteristics of geography but Egyptian people's lack of attention to cleanliness. For example, he exemplified these claims in *كتاب دفع مضر الأبدان بأرض مصر* [*On Remedies to Recover of Diseases Seen in Egypt*], especially in the passage on the diseases that had occurred in Fustat.⁶⁸ Ibn Jāmī' (d. 594/1198) in *طبع الإسكندرية* [*The Structure of Alexandria*]⁶⁹ touched upon the relationship of the air of a town with the health and diseases of its people, as Ya'qūb al-Isrā'īli (d. 600/1204) similarly did in *مزاج دمشق و وضعها و تفاوتها من مصر* [*Structure of Damascus, Its Position and Difference from Egypt*].⁷⁰

On the doctrine of miasma and the concept of plague, Ibn Abī Uṣaybi'a attributed a work to Ibn Sīnā's mentor Abū Sahl 'Isā b. Yaḥyā al-Masiḥī⁷¹ which was also written

65 al-Tamimi, *Māddat al-baqā'*, s. 151–2.

66 Corruption and pollution of air in Arabic has been the source of an independent literature. On the literature see Lutfallah Gari, "Arabic Treatises on Environmental Pollution up to the End of the Thirteenth Century", *Environment and History* 8/4 (Kasim 2002): 475–488.

67 Peter E. Pormann and Emilie Savage-Smith, *Medieval Islamic Medicine*, (Washington D. C.: Georgetown University Press, 2007), 44.

68 Ibn Rīḍwān, "Kitāb def' maḍarrat al-abdān bi-'arḍ Miṣr", *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften*, edited by Fuat Sezgin, VI (Frankfurt: Institut für Geschichte der Arabisch-Islamischen Wissenschaften, 1990), 18–19. Also see Michael W. Dols and Adil S. Jamal, *Medieval Islamic Medicine: Ibn Rīḍwān's Treatise "On the Prevention of Bodily Ills in Egypt"*, Berkeley: University of California Press, 1984.

69 Ibn Jāmī', *Tab' al-Iskandariyya*, edited by Müreyzen Said Usayri, Sa'd 'Abd Allah Bushrā (Mecca: Cāmi'ātu Umm al-Qurā, 1997/1417).

70 Ya'qūb al-Isrā'īli, *Mizāj-ı Dimashq wa wad'uhā wa tafawutuhā min Miṣr*, Nuruosmaniye Library, 3589, ff. 34a-49a.

71 Ibn Abi Uṣaybi'a, 'Uyūn al-anbā', 436-7.

as a treatise⁷² on the region of Khwarazm. Ma'mūnī ruler Abū al-'Abbās Ma'mūn b. Ma'mūn (r. 1008-1017), who was known for his patronage, ordered al-Masiḥī to write a work on plague,⁷³ in relation to epidemics caused by corrupted air also seen in this region. The presence of a treatise on the bad humor written by order of the ruler in the copy in the Şehid Ali Pasha collection and also the fact that al-Masiḥī wrote a short treatise on smallpox⁷⁴ may be related to the intellectual interest of the ruler and the desire of al-Masiḥī to write about some diseases. When examining the content of the work al-Masiḥī wrote around the concept of plague in four parts, the corrupted, fetid air and the disease conditions caused by that factors are seen to be at the center. The author briefly explained the human need for air in the first part of the work, and the types of air (*aşnāf al-hawā' al-wabī'*) that cause plague (epidemic) is the subject in the second part. The fourth part of the work involves the narrative about the reasons for the emergence of the diseases that spread with the corrupted air, their characteristics, and how to treat them; this was largely preserved in the post-14th century treatises. For example, many issues may be seen in the works from both periods, such as how to remove the fetid fluid in the body, how to follow a nutritional diet, which drugs and incense to use, how much to exercise, whether to go to a bathhouse, and how to maintain sexual life.⁷⁵

Physician and philosopher Qusṭā Ibn Lūqā wrote a treatise on the concept of contagion, which was accidentally attributed to al-Masiḥī's treatise. In his treatise on how diseases are contaminated as a problem, the author first discussed whether *i'dā'* [contagion] is acceptable or not. Then he explained the concept in accordance with the physics and psychology theories of the period over the category of *infi'āl* [passion], and finally discussed it on a medical basis. Contagion is not only from person to person, but occurs through breathing along the axis of the miasma theory; for example, he tried to reveal how skin contaminations occurred. Qusṭā Ibn Lūqā claimed the contamination resulting in eye inflammation (*ramad*) to not be caused by bad weather, but by rays that exited the eye in relation to the optics and vision theories of the period. The author's acceptance of disease that occurs

72 For three copies of the work, see Fuat Sezgin, *GAS*, III, 327. Although Qusṭā Ibn Lūqā (d. 300 / 912-13) wrote the fourth copy, which was copied in Egypt immediately after the epidemic of 1347 (749/1348) and presented to the opinion of the Mamluk sultan, al-Malik al-Şāliḥ, this is not true. Because the ruler of Ma'mūnī, who ordered the work to be written, lived about a century after Qusṭā Ibn Lūqā.

73 Abū Sahl al-Masiḥī, *Risāla fi taḥqīq amr al-wabā wa-l-iḥtirāz 'anh wa iṣlāḥih idhā waqa'a*, Süleymaniye Library, Şehid Ali Paşa 2095, ff. 63b.

74 For both treatises see Süleymaniye Library, Şehid Ali Paşa 2095, ff. 73a-78a; 78a-80a.

75 The quotation is formed of the following two copies. al-Masiḥī, *Risāla fi taḥqīq amr al-wabā'*, Şehid Ali Paşa 2095, ff. 63b; Şehid Ali Paşa. 2103, ff. 1b-2b. This work is being prepared for publication.

in a person's eye who looks at the sun during the eclipse as an infectious disease is one proof that they did not consider contamination to only belong to diseases such as leprosy.⁷⁶ The explanation of the process by which contamination occurs in this treatise was the source of medical discussions about how many diseases are contagious, including *ṭā'ūn*.

Although explanations about the plague are found in the works of Ibn Sīnā, who did not write an independent work on *ṭā'ūn*, they contain no detailed information about *ṭā'ūn*. Ibn Sīnā defined the concept of plague as air mixing with harmful vapors and becoming toxic according to the classical theory in *Daf' al-maḍārra al-kulliyya 'an al-abdān al-insāniyya*. Lists of the measures to be taken when symptoms appear were added as a practice transferred from Galen.⁷⁷ While Ibn Sīnā discussed the concept of plague in many places in *al-Qānūn fi-l-ṭibb*, it was less mentioned as *ṭā'ūn*. As a type of disease, *ṭā'ūn* is considered under compound diseases. *Ṭā'ūn* is defined as a type of hot and inflamed boils (*awrām*) by Ishaq b. Ḥunayn and Abū Bakr al-Rāzī, who were mentioned above. *Ṭā'ūn* as the combination of blood and yellow bile (a boil) occurs in three lymph nodes: behind the ear, armpits, and groin.⁷⁸ In the section describing the general treatment of boils in *al-Qānūn*, *ṭā'ūn* and its treatment are given in more detail. What is said about the meaning and origin of the concept is more evident here. Four different words are used in Greek for *ṭā'ūn*. One is *būbūs*. In Greek sources, the meaning used for all kinds of swelling in the organs associated with lymph nodes had been translated into Arabic as *ṭā'ūn*. These swellings occur in lymph nodes connected with organs such as the tongue and ears (i.e., sense organs) or in lymph nodes connected to the armpits and groin (i.e., not the five external senses). By further narrowing the meaning, *ṭā'ūn* has been used over time for feverish, hot, toxic, and deadly swellings. The poison destroys the structure of the organ and causes the color of its environment to change. Blood, pus, and similar things may flow from this swelling. The poison transmits its corruptive nature to the heart through two arteries; vomiting, palpitations, and fainting occur and even lead to death with increased symptoms. The least damaging *ṭā'ūn* is red in color, while the

76 The only known copy of the work is in the Ayasofya collection. See Qusṭā Ibn Lūqā, *Fi-l-i'dā'*, Süleymaniye Library, Ayasofya 3724, ff. 101a-105b. Based on this copy, Hartmut Fähndrich published the treatise and translated it into German. Hartmut Fähndrich *Abhandlung über die Ansteckung von Qusṭā Ibn Lūqā* (Stuttgart: Deutsche Morgenländische Gesellschaft, 1987).

77 Ibn Sīnā, "Daf' al-maḍārra al-kulliyya 'an al-abdān al-insāniyya", *Min mu'allafāt Ibn Sīnā al-ṭibbiyya: Daf' al-maḍārra al-kulliyya 'an al-abdān al-insāniyya, al-Urjūza fi-l-ṭibb, Kitāb al-Adwiya al-qalbiyya*, edited by Muḥammad Zahayr al-Bābā (Aleppo: Meshūrāt Cāmi'atū Haleb, Meshūrāt al-Munazzamāt al-'Arabiyya li'l-tarbiya wa-l-thaqāfe wa-l-'ulūm, 1404/1984), 30.

78 Ibn Sīnā, *al-Qānūn fi-l-ṭibb*, edited by Muḥammad Emin al-Dannāvi (Beirut: Dār al-Kutub al-'Ilmiyya, 1420/1999), I, 107-108.

yellow type is more dangerous. No one survives the black type. *Ṭā'ūn* occurs often in times of plague or in places where the structure is suitable for plague.⁷⁹ What Ibn Sīnā suggested are methods such as taking blood from the vein and removing corrupted fluid from the body with the tools suitable for the conditions of the period. In addition, heart-protecting and strengthening supplements should be used and some practices should be managed. As a corruption exists related to hot fluid due to the nature of *ṭā'ūn*, products with a cold humor and fragrance should be used to counter this.⁸⁰ However, as I will discuss in the next section, a definitive solution would be expected from Ibn Sīnā for the treatment of this disease.

III. The Birth of a Literature and the Mamluk Perspective

The emergence of the genre of treatises written on *ṭā'ūn* or bubonic plague both in the Islamic world and in Europe since 1347 may help to consolidate or contrarily change some opinions about the pre-1347 period. As can be seen, the list at the end of the study gives an idea why *ṭā'ūn* had not been the subject of individual works until 1347.

As far as is known, the first treatise on *ṭā'ūn* (i.e., bubonic plague) seen in the Islamic world belongs to Zayn al-Dīn Ibn al-Wardī (d. 28 Dhū al-hijja 749/March 19, 1349), who died in Aleppo during an epidemic in which thousands of people lost their lives. The *Maqāla fī-l-wabā'* from Abū Sahl al-Masīhī, who wrote in Khwarazm centuries ago in order to respond to the need for a medical solution to disease, was also copied for the Mamluk Sultan in Egypt in the same year.⁸¹ How much Ibn al-Wardī was familiar with the thoughts and works on Egypt as the home of diseases and epidemics is not known from Ibn al-Jazzār and Ibn Rīḏwān, even though they disagreed on the reasons. However, he did for sure think that *ṭā'ūn* had not started in Cairo in *Risālat al-naba'an al-wabā'* because, according to him, the epidemic had started in China and reached Egypt through India, Iran, Anatolia, and the Mediterranean islands after 15 years of wandering.⁸² However, Egypt certainly became a base for the epidemic after that time as well as the geography where the *Ṭā'ūn* literature as is used today was born. Certainly, this is no surprise, because being located at the center of trade networks has caused the region to be one of the places most exposed

79 Ibn Sīnā, *al-Qānūn*, III, 164–165.

80 Ibn Sīnā, *al-Qānūn*, III, 165.

81 Abū Sahl al-Masīhī, *Risāla fī taḥqīq amr al-wabā' wa-l-iḥtirāz 'anhu wa işlāhīh idhā waqa'a*, Süleymaniye Library, Şehid Ali Paşa 2103, ff. 1a, 22a.

82 Dols, "Ibn Al-Wardī's *Risālah Al-Naba'*", 448.

to the disease.⁸³ On the other hand, the Mamluks' establishment of a strong and stable political structure made Egypt become a center of science and medicine. In short, the Arabic *Ṭā'ūn* literature being born in Egypt during the second epidemic is quite understandable, as it is the geography that suffered the most from the disease and sought an answer from within its own science paradigm.

One of the first treatises written in Latin belongs to healer John a`la Barbe of Liege. As far as is known, John a`la Barbe wrote his five-folio treatise in Latin in 1365. The treatise was translated into French six years later and, besides being copied many times, has also served as a source for the treatises later written in Latin and other languages in Europe. The author presented a thesis around miasma theory and humoral pathology, which he considered to be of Galen origin.⁸⁴ Although the treatise is not structurally similar to the Mamluk-period treatises, John a`la Barbe's references to Islamic physicians in his work show that he knew this medical tradition as well. Despite the influence of this work, the first work in Europe probably belongs to another author. According to Manfred Ullmann, the treatise written in Catalan by Jacme d'Agramont (d. 1348), who was also a victim of plague, caused the silence in this area to break in Europe. After Ullmann informed about this work written in 1348, he distinguished between the treatises produced in two different cultural worlds. He mentioned the dogmatic character of the works written in the Islamic world where prayer, magic, and talismans were determinants and at the same time developed transformations with rational ideas.⁸⁵

The Mamluk and Maghreb regions were the first to fight against this disease in the Islamic world in a scientific sense. Under this title, I would like to discuss the prominent features of the works produced in the Mamluk intellectual environment.

(i) After the emergence of the epidemic, the accompanying scientific activity sought to understand, define, record, and seek remedies for what was encountered in the Mamluk, Maghreb, and Andalusia regions, particularly in the first half of the

83 For the effect of the Black Death in Egypt in this first process, see Stuart J. Borsch, *The Black Death in Egypt and England: A Comparative Study* (Austin: University of Texas Press, 2005).

84 For the copies of the work, see Dorothea Waley Singer, "Some Plague Tractates (Fourteenth and Fifteenth Centuries)", *Proceedings of the Royal Society of Medicine* 9 (1916): 161–172. Singer quoted the French translation of the work, made in 1371, from the copy in the Paris Bibliothéque Nationale, in the appendix at the end of this article. See "Appendix", 200–212. This work is known to belong to John Mandeville, or John of Burgundy as Singer claims. For a study correcting this mistake, see Alpo Honkapohja & Lori Jones, "From *Practica Phisicalia* to *Mandeville's Travels*: Untangling the Misattributed Identities and Writings of John of Burgundy", *Notes and Queries* 67/1 (March 2020): 18–27.

85 Ullmann, *Die Medizin*, 247–8. What Ullmann said about the literature in the Islamic world he studied contains disputable elements.

century when many works were written.⁸⁶ Apart from these works, the sections devoted to ṭā'ūn need to be taken into account in the medical works in encyclopedias for understanding the nature of medical knowledge on ṭā'ūn.

(ii) Written as sermons, the short treatises by Zayn al-Dīn Ibn al-Wardī, one of the first authors in the Mamluk period, are very valuable as sources of information about the cities where the disease was born and spread. When talking about the effects of the epidemic, the author stated that the elite among the people had researched the medical works and carried out the practices described in these sources.⁸⁷ As can be seen in Ibn al-Wardī's work, the inclination toward medical knowledge in the treatises written in Egypt during the Mamluk period highlighted the effort to understand what the disease was. These treatises, which include the definition of the disease within the framework of the humoral pathology paradigm at different scales, showed uncertainties and confusions in the quotations from the works of physicians about the definition, diagnosis, symptoms, and treatment of the disease. This is also actually understandable because no satisfactory explanation about ṭā'ūn existed in previous medical literature. Therefore, these early treatises were content with repeating the information from the previous literature. One of these authors, Qāḍī of Safed Muḥammad b. 'Abd al-Raḥmān Ḥusayn al-Uthmānī is seen to have relied on the information contained in sources such as Abū Bakr al-Rāzī's *Shifā' al-qalb al-maḥzūn fī bayān mā yata'allaq bi-l-ṭā'ūn* written in Hijri 775.⁸⁸ In addition, Nawawī's phrase "every ṭā'ūn is a plague, not every plague is a ṭā'ūn," which is frequently seen in later sources, is found here as well.

[Text 2] قال الأطباء: الطاعون بشور أو ورم مع تلتهب شديد، ويكون أخضر وقد يكون أحمر وقد يكون أسود، وكلها رديئة خطيرة خاصة ما كان منها أخضر. فيصير ما حوله أسود ويتبع ذلك عشي وخفقان أو قيء. وهو من الأمراض الشديدة الخطرة خاصة إذا أفرط وإن كان الهواء وبائيا كان أروى وأخطر. وقد يحصل ضمن حمى وبائية، وقد تحصل الحمى ضمنها، وقد يقع أحدهما دون الآخر. ويكون حدوثه في اللحم الرخو الموجود في النغانغ أو الإبطين أو الخالبين. وأما الوباء فهو فساد مزاج الفصل وخروجه عن طبعه الذي خلق له لما يحدث فيه من الحوادث المستغربة في مثله.

Text 2 Translation: Physicians said: Ṭā'ūn is the boils and swelling with severe inflammation. It can be green, black, or red. All of these are deadly and dangerous, especially the green one. Around the ṭā'ūn, the boil darkens, followed by fainting, palpitations, and vomiting. Ṭā'ūn

86 For comparison, see Appendix III, Figure 2.

87 Ibn Ḥajar, *Badhl al-mā'ūn*, 375. For English translation see Dols, "Ibn Al-Wardī's *Risālah Al-Naba'*", 454-5.

88 Our study on the critical edition and its content of this treatise is at the publishing stage.

is one of the deadliest diseases when it reaches its advanced stage, and if the weather is also epidemic (*wabā'i*) the disease becomes the most virulent and severe. The *ṭā'ūn* can occur as the fever that comes with the corruption of the air, or the fever may be in the *ṭā'ūn*. Or one of them can occur without the other. *Ṭā'ūn* occurs in lymph nodes behind the ear, armpits, and groin.

Plague, on the other hand, is the corruption of the seasonal structure and seen in the emergence of weather events that are considered strange.⁸⁹

(iii) The dearth of information on diagnosis notwithstanding, our sources give more information on practices that can be called medical treatment. A guide compiled from medical sources on movement, bathhouse, sexual life, nutrition, cleaning, and incense practices, especially in times of *ṭā'ūn*, appear in some if not all of these studies. As can be guessed, the information given here is presented in accordance with the doctrines closely related to the disease. For example, *ṭā'ūn* presents a structure originating from corrupted air, mainly related to blood and fire, and dominated by the four humors (*al-akhlāt al-arba'a*). Therefore, the guides and antidotes given here are exactly compatible with similar diseases authors such as al-Tamīmī and al-Masiḥī wrote about as cited in the previous headings. For example, when looking at *Shifā' al-qalb al-maḥzūn* again, a number of recommendations were taken from these sources, especially regarding the foods and drinks to avoid.

[Text 3] فأما ما ينبغي للإنسان أن يتقيه في زمان الوباء والطاعون من الأطعمة والأغذية والأشربة فكل شيء مولد للدم الكثير مسخن للأبدان كاللحوم والحلاوات والثرائد. وينبغي اجتناب شرب اللبن الحليب وأكل فواكه الفجة التي لم تنضج واجتناب الجماع. فقد نصّ الأطباء على أن الجماع في الطاعون من أعظم الأشياء مضرّة، وكذلك الخمر في الوباء، قالوا إنها من أقوى أسباب الهلاك.

Text 3 Translation: In times of plague and *ṭā'ūn*, people should avoid all kinds of foods, nutrition, and drinks that will produce more blood and increase body temperature, such as meats, desserts, and brews [*terid/trit*]. Avoid drinking milky things, eating unripe raw fruits, and sexual relations. Physicians have determined sexual relations to be one of the most damaging things when *ṭā'ūn* occurs, as is drinking during the plague. Physicians say these two are the most influential things that cause death [at such times].⁹⁰

(iv) The insufficient medical knowledge about the stages of diagnosis and treatment of the disease can be said to have fed an insecure attitude toward medical knowledge. For example, when looking at the statements from Ibn al-Wardī, he cannot be said to have quite approved of the attitudes mentioned above. In his treatise, he expressed seeking shelter in Allah with a sincere plea, as protection

89 Muḥammad b. 'Abd al-Raḥmān al-Uthmānī, *Shifā' al-qalb al-maḥzūn fī bayān mā yata'allaq bi-l-ṭā'ūn*, Süleymaniye Library, Hüsrev Paşa 258, ff. 6b–7a.

90 al-Uthmānī, *Shifā' al-qalb al-maḥzūn*, ff. 29a.

and recovery from this malady are only in His hands. He mentioned a prayer, a language of invocation that expanded in the following literature; even some of the works were devoted to Ṭā'ūn prayers.⁹¹ The author of one of the first works written in the Maghreb region, Ibn Haydūr Abū al-Ḥasan 'Alī b. 'Abd al-Allah al-Fāsi al-Tādili (d. 816/1413), stated two ways to exist for dealing with this disease in *al-Maqāla al-Hikmiyya fi-l-Amrād al-Wabā'iyya*. The first of these is taking advantage of the influence of letters. The weapon used here is the prayers in the hadiths transmitted for generations. The second is medical methods.⁹² Regardless of the subject of the works, very common practice was to write Ṭā'ūn prayers at the beginning and end of the manuscripts. Scientific authors from the Mamluk period show themselves predominantly in the hadith sources and the answers from the medicinal questions the Prophet gave regarding identifying disease, whether disease is a punishment for the Muslim ummah, how to enter and leave a place where ṭā'ūn is, whether seeking a cure is permissible or not, and how one can recover from this malady. The treatises of this period and frequent citations from Nawawi's *al-Minhāj fi sharḥi Ṣaḥīḥi Muslim b. Ḥajjāj* can be good examples of this.⁹³ This accumulation reached its peak in the treatise from the great hadith scholar Ibn Ḥajar al-'Asqalānī. Ibn Ḥajar took into account the treatises written before him, some of which have not survived; yet he wrote a text that exceeded them. What ṭā'ūn means to the Muslim ummah according to Ibn Ḥajar implies all issues such as coming with jinn, contagion, leaving the place where a ṭā'ūn is, praying for the cure of disease, becoming a martyr when dying from the disease, and the virtue of ṭā'ūn. These are all based on hadith literature, and all the subtopics of the issue can be stated as the subject of a discussion on transmission (*naql*). Ibn Ḥajar's treatise was very determinant in the development of the Mamluk period texts in a religious-legal framework, and these discussions were among the priority matters of the Ottoman period treatises.

(v) The epidemic also affected the scientific world, the authors, and these around them. Those who wrote the first works in particular directly observed the epidemic; some of them even died in the epidemic or lost their family members and relatives. In this respect, these treatises are worth considering in historical studies, especially biographies, plague histories, and urban histories. Let's briefly look at the

91 Dols, "Ibn Al-Wardi's *Risālah Al-Naba'*", 454–55.

92 Ibn Haydūr, *al-Maqāla al-ḥikmiyya fi-l-amrād al-wabā'iyya*, Khiḍānat al-Ustāz al-Manūni, 3/455, ff. 40.

93 For example, Zayn al-Dīn Ibn Nujaym (d. 970/1563) especially mentioned that he followed Nawawi and al-Suyūṭī in his short treatise titled *Risāla fi-l-ṭā'n wa-l-ṭā'ūn*. See Zayn al-Dīn Ibn Nujaym, *Risāla fi-l-ṭā'n wa-l-ṭā'ūn*, Süleymaniye Library, Bağdath Vehbi 2111, ff. 47b.

observations of Muḥammad b. ‘Abd al-Raḥmān Ḥusayin al-Uthmānī, one of the first authors to study this effect:

[Text 4] الأول الطاعون العام في المحرم سنة تسع وأربعين وسبعائة في مصر وبلادها وقوى أثره بالشام في ربيع الأول، عمّ ممالك الإسلام وبلاد الكفر، وعات شرقا وغربا في البر والبحر، ونزل بالأدميين والوحوش والطيور والأنعام. كان يموت بمصر كل يوم ألوف، وفي دمشق وحلب كذلك، وبلدنا صغد مع صغرها بأوراق مائة ومائة وخمسين، وبلا أوراق مالا يحصر. فأخلى كثيرا من البلاد وعات في الخلق حتى عجز الناس عن دفن موتاهم. ماتت امرأة عندنا لم نجد من / [٤٤ظ] يحملها إلى المقبرة حتى حملت أنا وعمي وأخي وأمير من أقاربنا وهم ضعفاء. ولقد كنت أمشي بالمدينة لا أسمع إلا صوت نائحه خفي ثم انقطعت الأصوات وقلت الناس، ومات النائب والقاضي ووكيل بيت المال وكنا شباب وأخوتي أطفال، فبقيت أنا أقضي غصبا لخلو البلد وأخي صغير يكتب أوراق الموتى عوض وكيل بيت المال، ثم مرض أخوتي وبقيت وحدي، ومات جميع من عندي من النساء والأولاد، وبقي عمي وأخوتي مرضى، كل ذلك والناس باهتون، فإنهم ما كان لهم معرفة بالطاعون. ولقد أوصى إلي بعض جبراني على ولده مع نحو عشرة أنفس فقبلت / [٤٥و] ذلك تطيبا لقلبه وقلت أنا أموت، فهات الأوصياء ولم يبق غيري. وكان الموت به علامات منها يَصُق الدم ومنها ظهور نقط حُمْر بالجسد ويطلع في مراق الجسد كتحت الإبط وفي الخالبين والرقبة كَبَّة كالدَّمَل تحمّر وتزرق. ومات في هذا الطاعون من العلماء الأكابر والصلحاء الأخيار في كل البلاد ما لا يحصى، وفقد العلماء من ذلك الوقت والصلحاء.

Text 4 Translation: The first is the plague that spread to Egyptian towns in 749 Muharram [1348 April], which later showed its effect in Syria. In the month of Rabi al-Awwal, it spread to all Islamic lands and the Land of Unbelievers. It reached from east to west, by land and by sea; it affected man, wild animals, birds, and domestic animals to the point that thousands of people were dying every day in Egypt, as well as in Damascus and Aleppo. Although small, our city Safed has also [daily] had a hundred, one hundred and fifty, and uncountable unrecorded deaths. It reached the point that people could not bury their dead. A woman died before our eyes; we could not find a person to carry her to the grave. Finally, I, my uncle, brother, and one of my relatives who was powerless carried her.

I was walking through the city, there was no sound except the dying, eventually deaths stopped and the population declined. The regent, judge, and treasurer had all died. We were young, my brothers were children. Due to the lack of people in the city, I became a judge; my brother was recording deaths on behalf of the treasurer, then he also got sick. I was left alone. All the women and children near me passed away. My uncle and brothers were able to survive but remained sick. All of this, and people were stunned because they didn't know about the *ṭā'ūn*. My neighbor entrusted his son to me [to take care of] within the presence of 10 people. Even though I said that I am mortal, I accepted it to give relief to his heart. Those who made the will died, no one left but me.

Because of this plague, the greatest scholars and the most righteous people of every town lost their lives. This is a time lacking scholars and righteous.⁹⁴

94 al-Uthmānī, *Shifā' al-qalb al-maḥzūn*, ff. 44a–b.

The first wave of the epidemic resulted in the death of many scholars. Ibn al-Labbān (d. 749/1349), Ibn Faḍl Allah al-'Umarī (d. 749/1349), and Ibn Ummu Qāsim are scholars who lost their lives in this first wave. This effect was depicted with other words in the elegy⁹⁵ written by the famous scholar Safadi (d. 764/1363) for those who lost their lives in the epidemic in 749. In the later waves of the epidemic, many famous scholars lost their lives. When examining Mamluk and Ottoman period historical and *tabaqāt* works, many scholars are seen to have died in the epidemics in both periods.⁹⁶ Ibn Abī Ḥajala (d. 776/1375), Ibn al-Jazarī (d. 814/1411), Muḥammad b. Abū Bakr Ibn Jamā'a (d. 819/1416), and Ibn al-Kirmānī (d. 833/1430) died in the following waves, Ibn Ḥajar lost two daughters due to this illness. Another author from the 15th century, Abū al-Maḥāsīn al-Maqdisī (d. 909/1503) witnessed what happened in this period in his treatise *Funūn al-Munūn fī Wabā'i wa-l-Ṭā'ūn*. Al-Maqdisī, who narrated the wave of 813/1410-11 from his father, witnessed four waves, recovered from the disease and got healthy again. Al-Maqdisī said the wave that came in 873/1468⁹⁷ had been very scary and lasted for a year; although most of the epidemics came from the East and spread to the West, it was the first epidemic to start from the West. This epidemic, which spread to Egypt, Damascus, and further east, caused a great loss of life. The author also noted that his son, daughter and mother had been martyred in this epidemic.⁹⁸

(vi) A history of the epidemics in Islamic history is given in many treatises. In this respect, the works are very important because they contain information not included in the chronicles. A list of *ṭā'ūn* epidemics is given in Ibn Ḥajar's *Badhl al-Mā'ūn* after Ḥusayn al-Uthmānī's *Shifā' al-qalb al-maḥzūn*. This approach is also seen in al-Suyūṭī's work. Ibn Ḥajar in particular is remarkable in terms of giving a long list of epidemics in Islamic historical sources. He also made long quotations from previous treatises for information not mentioned in such sources and quoting the treatise as a whole. For example, al-Suyūṭī also conveyed the entire works of Ibn Abī Ḥajala. However, as we discussed in the previous title here, the reader should be careful about how many of the quotations from chronicles written before 1347 had been *ṭā'ūn* or bubonic plagues.

95 İsmail Durmuş, "Safedi", *DİA*, XXXV, 447-50.

96 Scholars who lost their lives in epidemics may be the subject of a different study. At the end of this article, a table about the Ottoman scholars who died due to the epidemic (see Appendix IV) is created. The numbers which obtained from only two *Shaqa'iq*'s supplementary show that the *'ilmiyya* suffered heavy losses in the Ottoman world.

97 The wave of 1468 was also very effective in Istanbul. See Varlık, *Akdeniz Dünyasında ve Osmanlılarda Veba*, 184.

98 Abū al-Maḥāsīn al-Maqdisī, *Funūn al-munūn fī wabā' wa-l-ṭā'ūn*, Süleymaniye Library, Fatih 3591.

IV. The Deepening and Expanding Literature in the Hands of the Ottoman Intellectual

Assessing the treatises written in the Ottoman period as the combination of the heritages from Mamluk, Maghreb, Andalusia, and Anatolia with the Ottoman mind will allow the proper framework to be stated. In the first 150 years of the Black Death in the Islamic world, the authors of independent scholarly works on *ṭā'ūn* mostly originated from the Mamluk geography. Remembering the Mamluk connection of the Ottoman scholar 'Abd al-Raḥmān al-Biṣṭāmī, who wrote the work at this period, would be appropriate. After the Ottoman Empire entered Egypt, the Egyptian and Maghreb scholars continued to write their works. Although Istanbul and its environments have become prominent in this literature since the 16th century, we can say that the language and content of the works written in the Mamluk period were also determinant in the Ottoman Empire. In particular, legal-theological debates have been adopted and developed from this literature. Aydınlı Hacı Pasha (d. circa 827/1424),⁹⁹ who did not produce independent work on *ṭā'ūn* and Tokatlı Mollâ Lütfi (d. 900/1495), who wrote one authentic work, can be counted as the first Anatolian scholars to write about *ṭā'ūn* in its first stages. 'Abd al-Qāhir al-Ṭūnusī, whose path took him from Maghreb to Istanbul and the sultan's councils, can be mentioned among the representative of the heritage in Morocco and Tunisia. As shown below, Ilyās b. İbrāhīm can be seen as a carrier of the heritage of the Maghreb and Andalusian Muslims as well as the heritage in the Latin world. Like Ilyās b. İbrāhīm, İdrīs Bidlisī spoke some about Latin physicians' struggle with *ṭā'ūn*. It seems that other than Mūsā Jālinūs (d. after 948/1542)¹⁰⁰ and possibly at the same time as him during the reign of Sultan Bāyezid II, other people had brought Latin physicians onto the agenda of the Ottoman palace.¹⁰¹ *'Alā'im-i Carrāhīn*, which was translated into Turkish during the reign of Sultan Bāyezid II with addendums from the translator, was one of the first medical works to mention *Ṭā'ūn* in Turkish after Hacı Pasha's *Müntehab-ı Şifā*.¹⁰²

99 Hacı Pasha, *Müntehab-ı Şifā: Giriş, Metin*, edited by Zafer Önler (Ankara: Türk Dil Kurumu, 1990), 172-177.

100 Morrison, Robert, "Musa Calinus' Treatise on the Natures of Medicines and Their Use", *Nazariyat Journal for the History of Islamic Philosophy and Sciences* 3/1 (November 2016): 77-136.

101 It is also noteworthy that several works on epidemics and *Ṭā'ūn* are recorded in the Catalog of Sultan Bāyezid II's books in the palace. Among them are the works of Mollâ Lütfi and 'Abd al-Qāhir al-Ṭūnusī. See Nükhet Varlık, "Books on Medicine: Medical Knowledge at Work", *Treasures of Knowledge: An Inventory of the Ottoman Palace Library (1502/3-1503/4)*, ed. Gülru Necipoğlu vd. (Leiden, Boston: Brill, 2019), 550.

102 İbrāhīm b. 'Abd Allah, *'Alā'imi Cerrāhīn: Cerrāh-nâme*, edited by Mehmet Gürlek (İstanbul: Türkiye Yazma Eserler Kurumu Başkanlığı, 2016), 106.

Two prominent names in the Ottoman Empire are Idris Bidlisi and Taşköprizâde. Idris Bidlisi said, “No one among the men of the knowledge (*ahl al-‘ilm*) and the men of the wisdom (*ahl al-‘irfân*) who wrote a work based on such an arrangement before him is known; he says that his work is the first in terms of its merits.”¹⁰³ Despite benefitting from the Mamluk legacy, this expression shows an awareness that the content of *al-Ibâ'* differed from other works. The synthesis of all this heritage would take place in the hands of Taşköprizâde in the 16th century.

(i) Prior to focusing on the content in the Ottoman-period plague treatises, focus on the languages of the works from the first stage would be appropriate. While the Mamluk-period works were in Arabic, Turkish works were also written in addition to Arabic in the Ottoman world of science.¹⁰⁴ As I will often include Arabic treatises from now on, I do not find it necessary to mention them one by one. As far as I can determine, the Ottoman physician Nidâ'î Mehmed Çelebi Ankaravî's (d. after 975/1567) work *Rabî' al-Salâma*,¹⁰⁵ which he dedicated to Selim II, should be the first Turkish work. I will reference the work as *The Spring of Healthiness* as it was written in the spring in addition to other peculiarities. Another author who wrote in Turkish was Hibri Ali Efendi Kızılhisarlı (d. after 1090/1679). He was asked to write a work on the *Ṭā'ūn* that took place in Kızılhisar (Eğriboz) in 1089, and he wrote *al-Fawâ'id al-Ḥibriyya fi-l-Ṭā'ūn wa-l-Wabâ'*.¹⁰⁶ *Risâla-i Ḥumma-yı Radî'a*, which is included in the mecmuas of Chief Physician Hayâtizâde Mustafa Feyzi (d.1103/1692), consists of five treatises titled *al-Rasâ'il al-mushfiyya li-l-amrâq al-mushkila*. It is not directly about the *ṭā'ūn*, even though it is about corrupted air and infectious fever diseases and has passages about *ṭā'ūn*. These diseases may be caused by bile, phlegm or black bile, depending on their effectiveness. Accordingly, its name, symptoms and treatments also differ.¹⁰⁷ Mustakimzâde Süleyman Sadeddin's (d.1202/1788) *Jihâz al-ma'jûn fi-l-khalâs min al-ṭā'ūn*, whose name seems to be a work of pharmacology, contains prayers about protection from *ṭā'ūn* and healing; it was written in Turkish.¹⁰⁸

103 Idris Bidlisi, *al-Ibâ' an mawâqif al-wabâ'*, Süleymaniye Library, Âşir Efendi 275, ff. 105a; Süleymaniye Library, Şehid Ali Paşa 2033, ff. 63b; Topkapı Palace Library, III. Ahmed 1473, ff. 8b.

104 On the transformation of the language of Ottoman-era treatises of the 16th century and beyond and the nature of knowledge in the treatises, see Nûkhet Varlık, “Between Local and Universal: Translating Knowledge in Early Modern Ottoman Plague Treatises”, *Knowledge in Translation: Global Patterns of Scientific Exchange, 1000-1800 CE*, Eds. Patrick Manning and Abigail Owen (Pittsburgh: University of Pittsburgh Press, 2018), 177–90.

105 Nidâ'î, *Rabî'u al-salâma*, Hacı Selim Ağa Library, Hacı Selim Ağa 882, 77b–106.

106 Hibri Ali Efendi, *al-Fawâ'id al-Ḥibriyya fi-l-ṭā'ūn wa-l-wabâ'*, Süleymaniye Library, Serez 2757, 1b.

107 Hayâtizâde, *Ḥummayât Risalesi*, Hacı Selim Ağa Library, Hacı Selim Ağa 868, ff. 112b–151b; Süleymaniye Library, Bağdatlı Vehbi 1389, ff. 68b–92b.

108 Mustakimzâde, *Jihâz al-ma'jûn fi-l-khalâs min al-ṭā'ūn*, Süleymaniye Library, Esad Efendi 1329, ff. 42b–49a.

Apart from these works written in Turkish are also works translated from Arabic to Turkish. Taşköprizâde Aḥmed Efendi's *Risālat al-shifā'* was translated into Turkish by the mathematics scholar Aḥmad Tawḥīd Efendi (1802-1869) by order of Maḥmūd II (r. 1808-1839).¹⁰⁹ Gevrekzâde Ḥasan Efendi's (d. 1216/1801) *Tarjama-i Mijannat al-tā'ün* was translated from Ilyās b. İbrāhīm's *Mijannat al-tā'ün wa-l-wabā'*.¹¹⁰ A second translation of this work was made by Aḥmad al-Shāmī 'Umarī in 1894 under the title *Tawfiqāt al-ḥamidiyya fi daf' al-amrād al-wabā'iyya*.¹¹¹ Another work written in Arabic and translated into Turkish is Idris Bidlisi's *al-Ibā' 'an mawāqī' al-wabā'*.¹¹² This treatise was translated into Turkish by Muḥammad Sālih Bidlisi (d. 18th century) under the title *Ḥiṣn al-wabā'* and presented to Sultan Maḥmūd I (r. 1730-1754).¹¹³ In particular, the translation of Idris Bidlisi's work contains all the main texts as well as addendums from the translator (i.e, words, sometimes sentences).

Another author who wrote in Arabic was Ḥamdān b. 'Uthmān Khoja al-Jazā'iri. The author completed his work *Itḥāf al-munsifin wa-l-udabā bi mabāhith al-iḥtirāz 'an al-wabā'* in 1253/1837-38 and dedicated it to Sultan Maḥmūd II.¹¹⁴ The Sultan liked the work and ordered it to be translated into Turkish, although Ḥamdān b. 'Uthmān Khoja did not consider his Turkish sufficient, he completed the translation personally and presented it to the Sultan. The Arabic version of the work is known as *Itḥāf al-udabā'* and the Turkish as *Thanā' al-itḥāf*. Although this situation gives the impression that these are different works, one is the author's Arabic original and the other his Turkish translation. Ḥamdān b. 'Uthmān Khoja also supported the quarantine council established at that time with his ideas about epidemics, with the views in his work even being put into practice in a short time.¹¹⁵ Sultan Mahmūd II's request for the translation of Taşköprizâde's work, as well as a translation of

109 Taşköprizâde, *Risālat al-shifā li-adwā' al-wabā'*, Bayezit Manuscript Library, Veliyyüddin Efendi 2514; Taşköprizâde, *Risālat al-shifā li-adwā' al-wabā'* (Egypt: Maṭba'a al-Vahbiyya, 1292); Aḥmad Tawḥīd Efendi, *Badhl al-mā'ün fi javāz an-khurūj 'an al-tā'ün*, İstanbul University, Cerrahpaşa Tıp Tarihi Library, 225, ff. 2a-b. Comparing the printed copy of *Risālat al-shifā* containing errors with the author's copy as critical edition and latinization of Aḥmad Tawḥīd Efendi's translation is being prepared for publication by the author of these lines.

110 This treatise is being prepared for critical edition by Ahmed Tahir Nur.

111 Nükhet Varlık studied on this treatise on her master's thesis.

112 This treatise is being prepared for critical edition by Mehmet Emin Güleçyüz.

113 See Muḥammad Şālih Bidlisi, *Ḥiṣn al-wabā'*, Süleymaniye Library, Esad Efendi 2484 ff. 4b. Latinization of this translation is being prepared for publication.

114 Ḥamdān b. 'Uthmān Khoja al-Jazā'iri, *Itḥāf al-munsifin wa-l-udabā bi mabāhith al-iḥtirāz 'an al-wabā'* (İstanbul: Dār al-Ṭibā'at al-Āmira, 1254), 6. The modern edition of this text and latinization of its translation is being prepared for publication.

115 Zekeriya Kurşun, "Osmanlı Cezayiri'nin Son Müdâfii Hamdan b. Osman Hoca (1773-1842)", *Tarihimizden Portreler: Osmanlı Kimliği Prof. Dr. Cevdet Küçük Armağanı*, ed. Zekeriya Kurşun and Haydar Çoruh (İstanbul: Ortadoğu ve Afrika Araştırmacıları Derneği / ORDAF, 2013), 51-52.

another work written in this field, meant that these works guided the government's health policies. Another important aspect of Ḥamdān b. 'Uthmān Khoja's work, as Idrīs Bidlīsī and Taşköprizāde defended, was the discourse on taking precautionary measures on religious and scientific grounds. I will talk about this in more detail below.

(ii) Since the first centuries of Islam, religious aspects such as submitting to the will of God in the face of disease, *tawakkul*, and never forgetting that the power that gives healing is Allah have come to the fore in medical works in addition to the hadith sources, *fiqh* literature, and Sufi works. The early Sufis in particular were a group that argued medical treatment to be against the understanding of *tawakkul* as established in the *naşş*. Aside from many scholars of *fiqh* and theologians, some physicians did not find this approach correct. The treatises written on *ṭā'ūn* have also inherited such a legacy, and these works have also had quite deep legal and theological discussions. This perspective, seen in the treatises written in the Mamluk period almost at a leveled with Idrīs Bidlīsī, has taken on a much more systematic aspect with Taşköprizāde. The last great work of the literature which the theological approach (*mutakallim*) manifested itself in despite the passing centuries was from Ḥamdān b. 'Uthmān Khoja al-Jazā'irī. This situation indicates that the discourse against seeking remedies and treatment has always existed in some way. Authors such as Idrīs Bidlīsī agreed that seeking medical remedies for the disease is not contrary to the *tawakkul* and hence faith, which has a certain equivalent in the Qur'an and hadiths, as well as on leaving the place where a *ṭā'ūn* is or treatment should not distract people from the understanding that power is in the absolutely hands of God. Therefore, the issue was negotiated to an intermediate position that does not harm the belief in God's Omnipotence (*Qādir*) and the Willing Agent (*al-Fā'il al-Mukhtār*) by seeking a remedy and showing the will of the person, and the claims are reinforced with the words that signify the *naşş*.¹¹⁶

When Idrīs Bidlīsī was returning from his pilgrimage in 1512, the convoy had approached Damascus with the information that *ṭā'ūn* had emerged in Cairo. Meanwhile, Sultan Bāyezid II had died and his successor Selim I ordered Idrīs Bidlīsī to return to the capital immediately. According to the usual route, while the convoy headed toward Alexandria and came to Istanbul by ship, Idrīs Bidlīsī went up from Aleppo to Alexandria and decided to come from Anatolia by road. This decision of his and his views spread, especially among the scholars of Damascus and Aleppo and some so-called Persian and Arab Sufis. However, Idrīs Bidlīsī avoided having an

116 Idrīs Bidlīsī, *al-Ibā'*, Åşir Efendi 275, ff. 104a, 107a et al.; Şehid Ali Paşa 2033, ff. 63a, 66a et al.; III. Ahmed 1473, ff. 6b, 15a et al.

unproductive discussion with them and arrived in Anatolia.¹¹⁷ In the meantime, his views on staying away from a place of plague as a necessity of religious judgment and reason and that entering such a place was religiously and mentally forbidden [*haram*] spread in scientific assemblies. He wrote his work *al-Ibā' an Mawāqī' al-Wabā'* [Eschewing Plague-Stricken Places] because of the statements of “a group of ignorant jurists” who stated trying to escape from the destiny of Allah to be *haram* and accepting Allah’s predestination (*qaḍā*) to be obligatory by considering some of the verses literally (*ẓāhiran*), and in a sense because of their accusations.¹¹⁸ Idris Bidlīsī dealt with the subject in a theological perspective alongside the criticisms and responses made to him here; he made an important contribution to the development of this discourse in the literature. As such, a reader who does not know the name of the treatise may think that he is reading a *kalām* text when looking at the introductions to the three subtitles. In the first two, addressing the *nass* related to the subject matter of the Willing Agent (*al-Fā'il al-Mukhtār*) reveals that a sensitive issue of belief is discussed while analyzing the concepts of predestination (*qaḍā*), fate (*qadr*), coercion (*jabr*) and free will (*ikhtiyār*). Likewise, Taşköprizāde’s treatise underlined from the start that the subject being discussed is about belief. Moreover, Taşköprizāde devoted part of the justification for writing the work to be about the religious dimension of the attitudes taken in the time of an epidemic and the delusion of trying to flee from an epidemic as being an attitude against doing whatever Allah wishes.

[Text 5] (أما بعد) فهذه رسالة الشفاء لأدواء الوباء أملتيتها نفعاً لكافة المسلمين في أمر الاعتقاد وصونا لعقائد الأمة في حق هذه البلية عن طرقي الاقتصاد، حتى توهم شردمة لا يعرفون الهر من البر أن الهلاك بالقرار والنجاة بالفرار، وما أوقعهم في هذه الهاوية إلا نسيانهم الفاعل المختار، أعاذنا الله وجميع المسلمين من هذه الداهية الدهياء والافتنان بهذه البلية العمياء ومن الوقوع في أودية الضلال في أمر هذا الداء العضال.

Text 5 Translation: Now I wrote *Risālat al-shifā li adwā' al-wabā'* to be beneficial to all Muslims in terms of faith and not to deviate the belief of the Muslim ummah during the evil time of this disease. That is to say, a group that could not distinguish between right and wrong imagined that standing in place would bring destruction and escape would bring salvation. It drove them to forget the *al-Fā'il al-Mukhtār* to this hellhole. May Allah protect us and all Muslims from this devastating disaster and blinding test, from falling into the valleys of heretics in this relentless disease.¹¹⁹

117 In the translation of the work, Muḥammad Ṣāliḥ Bidlīsī states that Idris Bidlīsī did not go to Alexandria, Beirut and Tripoli but came to Kayseri and then Konya by land. See Muḥammad Ṣāliḥ Bidlīsī, *Ḥiṣn al-wabā'*, Esad Efendi 2484, ff. 5b.

118 Idris Bidlīsī, *al-Ibā'*, Aşir Efendi 275, ff. 102b-103b; Şehid Ali Paşa 2033, ff. 62b-63a; III. Ahmed 1473, ff. 5a-6b.

119 Taşköprizāde, *Risālat al-shifā*, 2.

Taşköprizâde obviously took a stand against those who have an extremely rational attitude. However, no clear record exists of who they were in the work. Like Idris Bidlisî, Taşköprizâde's first issue is the concept of *tawakkul*. Taşköprizâde classified understandings of *tawakkul* in Islamic thought and opened a discussion in the introduction on the evidence in which different approaches are based. These parts are the places where the author shows his strong theologian identity. I believe that Taşköprizâde was trying to justify the possibility of a middle position, as Idris Bidlisî also did.

(iii) Although the current medical paradigm does not provide much opportunity for diagnosis or treatment, the medical discourse in the Ottoman period texts was relatively more prominent than Mamluk works. The first possible reason to be given for such a situation is the Ottoman authors being physicians or chief physicians. Two treatises written in the period of Sultan Bâyezîd II, *Kitâb al-Ṭibb fî tadbîr al-musâfirîn wa maraḍ al-ṭā'ûn*¹²⁰ by 'Abd al-Qâhir al-Ṭûnusî (after 899 / 1493-94) and Ilyâs b. Ibrâhîm's *Mijannat al-ṭā'ûn wa-l-wabâ'*, manifested medical knowledge prominently. Ṭûnusî stated the presence of a discussion on medicine, *Ṭā'ûn*, and the cause and treatment of *Ṭā'ûn* among Sultan Bâyezîd II in Istanbul, where some distinguished people lived. Stating that he had something to say on this subject, al-Ṭûnusî wrote a work consisting of two parts. The second part of this work was dedicated to Sultan Bâyezîd II and is about *Ṭā'ûn*, its causes, and its treatment, as well as a narrative in accordance with the prevailing medical paradigm.

The author of *Mijannat al-ṭā'ûn wa-l-wabâ'*, who came to Istanbul from Spain and further advanced the medical discourse, is Ilyâs b. Ibrâhîm. The author begins with a list of medical sources that he directly uses. The list,¹²¹ ranging from Hippocrates' *Epidemia* to Ibn Rushd's (d. 595/1198) *al-Kulliyât*, makes clear that the issue will be dealt with from a medical perspective. The author, who wrote a text that would be instrumental in the service of Sultan Bâyezîd II, pointed out two issues in terms of the justification for writing the work. The first is the relationship he considered to be between *ṭā'ûn* and earthquakes. As a matter of fact, before he wrote this work, an earthquake had occurred in Istanbul followed by the start of the *ṭā'ûn*. The author, who explained this theory by citing sources back to Aristotle, summarized the relationship established among climate, air, and epidemic seen in pre-Islamic medical sources,

120 'Abd al-Qâhir al-Ṭûnusî, *Kitâb al-Ṭibb fî tadbîr al-musâfirîn wa maraḍ al-ṭā'ûn*, Süleymaniye Library, Ayasofya 4814, ff. 55a-101b.

121 Ilyâs b. Ibrâhîm, *Mijannat al-ṭā'ûn wa-l-wabâ'*, Süleymaniye Library, Esad Efendi 2483, ff. 28b.

preserved the narrative in these sources, and referenced other different sources.¹²² The second reason the author gave for writing the work is related to the need for medical discourse and practice in the field, probably in relation to the inadequacy and unwillingness of Istanbul physicians in treating *ṭā'ūn*:

[Text 6] إني وجدت أطباء هذه الديار لا يعالجون مرض الطاعون إلا قليلا، ولا يلتفتون إليه إلا متكاسلا، ويعدّون الخلاص من هذا المرض أمرا ممتنعا محالا، وإني أيضا لا أشكّ في هذا المرض مشكل وعلاجه صعب، لكن الخلاص منه ممكن، لأنني عاجلت هذا المرض مرارا ما تلقّيت من الأطباء المهرة، فعُوّفي بإذن الله تعالى.

Text 6 Translation: I found the physicians of this region to be as follows: They cannot cure the *ṭā'ūn* except for a little something, they approach it with a loose attitude and see the inevitable recovery from this disease as impossible. I also do not doubt that this disease is difficult and its treatment is arduous, but it is also possible to cure it because I treated this disease many times with what I received from the expert [*ḥādhiq*] physicians, and it was cured with the permission of Allah.¹²³

I will suffice to indicate one more point in this treatise, one that requires each folio to be read with special attention. In the work, the analyses regarding the history of fevers caused by the corruption of air as well as the medical identification and treatment of *ṭā'ūn* are of paramount importance. According to him, previous physicians, especially Ibn Sinā, gave very brief mention of these diseases. Ibn Sinā, who wrote in more detail about the treatment of other diseases in *al-Qānūn*, gave a brief explanation concerning *ṭā'ūn*, which had become widespread and done lots of harm. Obviously, this situation was brought to the agenda by the Latin physicians who'd been studied by Ilyās b. Ibrāhīm, as he'd included the views of Christian physicians in Europe in the reason for Ibn Sinā's silence on this issue. These physicians probably examined *al-Qānūn* more carefully in order to find a cure after 1347; they sought a reason for the silence of this thoughtful philosopher physician when they could not find what they had hoped for. While Ibn Sinā wrote about diseases that had been experienced and examined many times, this disease needed to be avoided as it was not very active in his time. While Ilyās b. Ibrāhīm was content with conveying such an interpretation, he took a different approach regarding Ibn Sinā's position on *wa ammā 'inda-l-faqīr*. According to Ilyās b. Ibrāhīm, thanks to the abundance of knowledge and sharpness of his mind, Sheikh Ibn Sinā thought that physicians were blind about how to treat this disease. Therefore, Ibn Sinā wrote briefly about this disease because he should have seen this disease closer to the metaphysical world (*rūḥānī*).¹²⁴ Ilyās b. Ibrāhīm's

122 Ilyās b. Ibrāhīm, *Mijannat al-ṭā'ūn*, ff. 30a, 31b.

123 Ilyās b. Ibrāhīm, *Mijannat al-ṭā'ūn*, ff. 30b.

124 Ilyās b. Ibrāhīm, *Mijannat al-ṭā'ūn*, ff. 35a.

reading of Ibn Sinā on this issue appears more accurate because finding the statements in *al-Qānūn* by justifying Ilyās b. Ibrāhīm. Not about *ṭā'ūn* itself, however, when Ibn Sinā was explaining the reasons for the corruption of the air, he took an approach similar to referencing certain strange states (*khawāṣṣ*), like a magnet attracts, to a metaphysical area: the flow of divine existence (*al-fayḍ al-ilāhī*).¹²⁵ According to him, one of the reasons for the corruption of the air is terrestrial (*min al-'arḍ*), the other is related to the air itself (*min al-hawā' nafsahū*). Apart from these, the air that people breathe may also be corrupted due to a celestial situation (*aw li-amr samāwī khafi 'ala-l-nās*) whose essence is hidden from humans.¹²⁶ Ilyās b. Ibrāhīm mentioned four causes of epidemic (plague) and *ṭā'ūn*. Ilyās b. Ibrāhīm stated divine reason apart from astronomical/astrological (*iqtirān al-'ulwiyyāt*), geological, and environmental reasons to be the real factor, based on Isidore of Seville (d. 636).¹²⁷ Thus, he pointed to the origins of this interpretation, predating Ibn Sinā. However, the name more cited in this context is Ibn Sinā. Mollā Lūṭfī, of whom I will talk about in more detail at the end of this section, explained the corruption of air to have both natural terrestrial causes and divine celestial causes with reference to the passage from Ibn Sinā in *al-Qānūn*. In his work *Taḍ'īf al-madhbaḥ*, Mollā Lūṭfī defended the functionality of mathematics, geometry, and the science of *wafq* while explaining the corruption of air and ways to recover from *ṭā'ūn*. Physicians' being unable to properly examine *ṭā'ūn* was also a part brought to the agenda by Idrīs Bidlīsī. In the following passage, Idrīs Bidlīsī pointed out that, although *Ṭā'ūn* is the most dangerous disease, it cannot take place in the literature sufficiently, an approach similar to Ilyās b. Ibrāhīm as the justification for this situation. Failure to record the causes and symptoms of the disease causes the diagnosis and treatment to be indeterminable:

[Text 7] والأطباء ما ذكروا في الكتب إلا الحميات الوبئية، ولم يوردوا في أكثر الكتب بابا واحدا مفردا في الطواعين مع أنها أعظم الأمراض وأخوفها، لأن أسباب حدوثها وعلامات عروضها في الأبدان والبلدان غير مضبوطة، وأكثرها لا ينظم بالقواعد المذكورة في الحميات الوبئية ويتخلّف التدابير الطّبيّة فيها غالبا لخفاء حال المبتلى به في أسبابها وعلاماتها، ولا يتعلّم عليها إلا المؤيّد بالقوّة القدسية في تدابيره ولا يقدر على علاجها وإبرائها إلا الحكيم القدير، فلهذا ترك أكثر الأطباء تعرّضهم بخصوص ذكر الطاعون وأصنافها وأسبابها وعلاماتها ومعالجاتها واكتفوا بالحميات الوبئية لاقتران أكثرها بالحمى العفني.

125 İbrahim Halil Üçer, "Mıknatıs Neden Çeker", *Divân Disiplinlerarası Çalışmalar Dergisi* 46 (2019/1): 29–58.

126 Ibn Sinā, *al-Qānūn*, I, 259.

127 Ilyās b. Ibrāhīm, *Mijannat al-ṭā'ūn*, ff. 30b-32a. For similar expressions, see Isidore of Seville, *On the Nature of Things*, translated by Calvin B. Kendall & Faith Wallis (Liverpool: Liverpool University Press, 2016), 167.

Text 7 Translation: Physicians have only dealt with fever epidemics in their books. Despite being the most severe and scariest of diseases, they have not included a separate chapter in most books on *ṭā'ūn* because the reasons for the emergence of *ṭā'ūn* in bodies and cities and the symptoms that manifest itself were not recorded correctly. The causes and symptoms of *ṭā'ūn* do not correspond to those listed for fever epidemics caused by corruption of the air. Medical measures of this often lag behind the disease due to the causes and symptoms in the person who is afflicted with the disease. Only a person who is supported by the subtlety of a sacred power will be pleased. The treatment and removal of *ṭā'ūn* is only under the power of the *Ḥākīm*, the Almighty God [*Qādir*]. This is why most physicians had avoided addressing *ṭā'ūn* in terms of its types, causes, symptoms, and treatments and had settled for fever epidemics, as most fever epidemics resemble one another and fevers originating from the fetid.¹²⁸

Despite this infertility in medical sources, Ibn Sinā's treatise *al-Qānūn* continued to be one of the most frequently referenced sources in the medical narrative. Idris Bidlisī discussed taking blood by the method of splitting the vein while referencing the section "*al-Ḥummayāt al-wabā'iyya*" from *al-Qānūn*. This issue included physicians who followed Ibn Sinā as well as those who opposed him. Apart from this tradition, Idris Bidlisī also mentioned the useful things he'd heard from Latin physicians such as, "*Ṭā'ūn* won't hurt anyone who eats a fermented onion every day."¹²⁹ Galen and Ibn Sinā are also the medical resources Taşköprizāde referenced the most.¹³⁰

Another 16th century author was the physician Nidā'ī, who stated his work to be "a combination of remedies and medicine, which he had reached with his own experience from hikmah, medicine, and religious sources." According to him, "Many words have been said about the plague and *ṭā'ūn*, and all kinds of things about its removal and treatment;" the need existed for a practical and guiding work (*dustūr al-'amal*), and such a request had been made from him. Despite its assertive rhetoric,¹³¹ stating the work to be a discourse-defining work in the Ottoman environment is difficult. However, as promised in the first place, religious sources and methods are included in the work in addition to the medical narration. For example, the author considers favoring and donating to people first within the scope of *shar'ī* [religious] precautions because being charitable primarily extends a person's life. The second is prayer, especially to receive the prayer of those who are in trouble.¹³²

128 Idris Bidlisī, *al-Ibā'*, Āşir Efendi 275, ff. 120b. Muḥammad Şālih Bidlisī, *Ḥiṣn al-wabā'*, 19b.

129 Idris Bidlisī, *al-Ibā'*, Āşir Efendi 275, ff. 151b; Şehid Ali Paşa 2033, ff. 95a; III. Ahmed 1473, ff. 77a. This example is conveyed in Taşköprizāde as follows: "Even reliable sources said this and based it on experience." Taşköprizāde, *Risālat al-shifā*, 61.

130 Taşköprizāde, *Risālat al-shifā*, 17, 20, 21, 43, 60, 62, 63.a

131 Nidā'ī, *Rabī'u al-salāma*, ff. 80a-81a.

132 Nidā'ī, *Rabī'u al-salāma*, ff. 97a-99a.

In the 17th century, Ibn Sallūm (d. 1080/1669)¹³³ served as a chief physician in the Ottoman Empire and touched upon the plague and ṭā'ūn issues in his work *Ghāyat al-itqān fī tadbīr badan al-insān*, a medical encyclopedia compiled at the request of his son after his death.¹³⁴ Ibn Sallūm's *Ghāyat al-bayān fī tadbīr badan al-insān* mentions types of plague, ṭā'ūn, their causes, symptoms, and treatments in the section "Fever (Ḥummayāt)."¹³⁵ As Ibn Sallūm viewed the subject within the humoral medicine (*al-tibb al-qadīm*) paradigm and its possibilities, he also used the medical knowledge that emerged in Europe at the beginning of the 16th and 17th centuries, thus evaluating humoral and new medicine together. Ibn Sallūm stated practices to exist that had been defended by German physician Daniel Sennert (1572-1637) and some European physicians (*wa dhahaba akthar al-muta'akhhirin min al-Efrenç wa Senartūs al-Carmānī ilā jawāz al-ḥaṣḍ*) regarding the treatment of ṭā'ūn that Islamic physicians did not.¹³⁶ Ṭā'ūn is found under the "Fever" section alongside smallpox (*judarī*) and measles (*ḥaṣba*) in Ibn Sallūm's *Ghāyat al-Bayān*, while Bubonic plague (*khiyārak*), which has the same symptoms, is covered under the "Swelling" section.¹³⁷ Ibn Sallūm provided different views while discussing how the epidemics and ṭā'ūn emerge. One of these is the theory on the emergence of specific poisons in some places. He gave Cairo and Istanbul as examples.¹³⁸ In the section discussing the types, causes, and treatments of plague, Ibn Sallūm is seen to have defined it in the most general sense and to have accepted plague as having three types of causes. Another cause is found alongside the terrestrial and celestial causes. As his succeeding Mamluk and Ottoman authors admitted, Allah troubles people with this disease because of the multiplicity of sins, adultery, homosexuality, cruelty and murder.¹³⁹ Ibn Sallūm's *Tarjamat al-Risāla fī-l-hummayāt al-radī'a wa-l-wabā'iyya* is an abbreviated Arabic version of the two-part Latin work on corrupted air and fever diseases by Spanish physician Luis Mercado (1520-1606), one of the representatives of the new medicine.¹⁴⁰ The introduction to this

133 We are working Ibn Sallūm's contribution and his environment with the scope of the entry of new medicine into the Ottoman scientific world within the ongoing TÜBİTAK 1003 Project.

134 Ibn Sallūm, *Ghāyat al-itqān fī tadbīr badan al-insān*, Ed., Muḥammad Yāsir b. Maḥmūd Jamil Zakkūr (Beirut: Dār al-Kutub al-ʿIlmiyya, 2018), 50–51.

135 Ibn Sallūm, *Ghāyat al-bayān fī tadbīr badan al-insān*, Köprülü Library, Fazıl Ahmed Paşa, 975, ff. 258 et. al.

136 Ibn Sallūm, *Ghāyat al-itqān*, 886–887.

137 Ibn Sallūm, *Ghāyat al-bayān*, ff. 273b-277b, 279b.

138 Ibn Sallūm, *Ghāyat al-itqān*, 878; *Ghāyat al-bayān*, ff. 273b.

139 Ibn Sallūm, *Ghāyat al-itqān*, 879.

140 Natalia Bachour, *Oswaldus Crollius und Daniel Sennert frühneuzeitlichen Istanbul: Studien zur Rezeption des Paracelsismus im Werk des osmanischen Arztes Şāliḥ b. Naşrullāh Ibn Sallūm al-Ḥalabī* (Freiburg: Centaurus Verlag, Media KG, 2012), 85.

treatise emphasizes the feverish plagues, plague, and *ṭā'ūn*, as well as their causes, similarities, and differences.¹⁴¹

Although Ilyās b. Ibrāhīm did not deny the spiritual dimension of the disease, he believed a cure to exist within the limits of bodily medicine and advocated mobilizing all the necessary means for it. However, limiting the prominence of medical knowledge in the discourse about *ṭā'ūn* to only the physician Ilyās b. Ibrāhīm or Ibn Sallūm would not be correct. Scholars are also found who advocate medical discourse and remedies, such as Idrīs Bidlīsī and his text on natural sciences as well as Taşköprizāde and his interests in various fields. Idrīs Bidlīsī skillfully used the information in the classical medical literature on the physical dimension of the issue of fighting the disease, which he divided into two as physical and metaphysical remedies. He even gave examples of Western physicians.¹⁴² In the next paragraph, I will discuss this issue in the context of Idrīs Bidlīsī, Taşköprizāde, and Ḥamdān b. 'Uthmān Khoja al-Jazā'iri's attitudes, which argue that seeking remedy and treatment have *naqli* [narrated] and scientific bases.

(iv) The authors of *Ṭā'ūn* treatises did not hesitate to word that the treatment of *Ṭā'ūn* would be very difficult or almost impossible within the means of medicine. Taşköprizāde mentioned a similar expression, which is seen in the passage I quoted from Ilyās b. Ibrāhīm. According to him, this disease is in the category of mostly untreated (*al-dā'u al-udāl*). However, this did not lead them to the idea that treatment and other medical remedies would be unnecessary. The possibilities of the current medical paradigm were seen to have been exhausted to the fullest, and applying this to be a requirement of reason and religion. However, experience shows that these were not enough to overcome the disease. Therefore, remedies should be sought within the limits of physics, but going beyond this and seeking assistance from the spiritual world is needed using ways that are considered juristic. In the Ottoman literature on *Ṭā'ūn* treatises, 'Abd al-Raḥmān al-Biṣṭāmī's treatise shows protections firstly as the reading of Qur'anic verses in a certain number, then reading some of the divine names of Allah in a specified order and number, followed by prayers and supplications for eliminating the disease are seen. In addition to al-Biṣṭāmī¹⁴³ being

141 Ibn Sallūm, *Tarjamāt al-Risāla fi-l-ḥummayāt al-radi'a wa-l-wabā'iyya*, Bayezid Devlet Library, Veliyyüddin Efendi 2520, ff. 301a-308b.

142 Idrīs Bidlīsī, *al-Ibā'*, Āşir Efendi 275, ff. 151b; Şehid Ali Paşa 2033, ff. 95a; III. Ahmed 1473, ff. 77a. حتى إني سمعت من ثقة بأن يروي عن بعض أطباء الأفرنج أنه من أكل كل يوم على الريق بصلا مخللا لم يضره الطاعون.

143 On al-Biṣṭāmī see İhsan Fazlıoğlu, "İlk Dönem Osmanlı İlim ve Kültür Hayatında İhvānu's-Safā ve Abdurrahmān Bistāmī," *Divān İlmi Araştırmalar Dergisi* 2 (1996-2): 229-40; Noah Gardiner, "The Occultist Encyclopedism of 'Abd al-Raḥmān al-Biṣṭāmī," *Mamluk Studies Review* 20 (2017): 3-38. Faruk Akyıldız, "Erken Dönem Osmanlı Tarihi'nde İlim ve Tasnif Anlayışı: Abdurrahmān Bistāmī'nin *el-Fevā'ihü'l-Miskiyye fi'l-Fevātihi'l-Mekkiyye* Adlı Eseri ve Etkileri" (MA Thesis, İstanbul 29 Mayıs University, 2019).

familiar with a heterogeneous philosophical system similar to Ikhwān al-Şafā', he also studied the legacy of Aḥmad al-Būnī (d. 622/1225 or 630/1232-1233)¹⁴⁴ on the science of letters and names (*'ilm al-ḥurūf wa-l-asmā'*); this being one of the important channels that had carried this culture to the Ottoman Empire is worth mentioning. Al-Būnī's works and views, especially *Shams al-Ma'arif*, as well as al-Biştāmī's *al-Fawā'ih al-miskiyya fi-l-fawātiḥ al-makkiyya* were accepted by the Ottoman scientific circles. Another name referenced after al-Būnī and al-Biştāmī is Mollā Lūṭfi. Mollā Lūṭfi, who acknowledged the need for guidance from the science of *wafq* in his 3-chapter *Taḍ'if al-Madhbaḥ* conveyed the short history of the science of *wafq* based on al-Biştāmī's *Shams al-āfāq*.¹⁴⁵ Mollā Lūṭfi, in the very short third and final chapter of the treatise, included the effect of Divine Names in recovering from the plague through some examples. While explaining how many times to read certain prayers, Mollā Lūṭfi used the word plague as he did throughout most of the work. Mollā Lūṭfi-İso referred to al-Būnī in the third chapter of *Taḍ'if al-madhbaḥ*: "Būnī said, 'Nobody dies from the *ṭā'ūn* in the house of a person who writes al-Bāqī al-Khallāq on the door of his house.'"¹⁴⁶

After al-Biştāmī and Mollā Lūṭfi, benefitting from *wafq* and similar sciences during *ṭā'ūn* epidemics also were included in the works by Idrīs Bidlīsī, Ibn Kemāl, and Taşköprizāde, who were high-level madrasa scholars (*mudarris*), judges, and chief jurists (*shaykh al-Islām*) who knew the language of *fiqh* very well. Such practices, which Idrīs-i Bidlīsī considered under the category of metaphysical measures (*al-isti'lāj bi-l-tadābir al-rūḥāniyya wa-l-intifā' bi-l-nāfi'āt al-rūḥāniyya*), were an area of asylum in addition to all the *'aqlī* [scientific] methods. Idrīs Bidlīsī used the comparison between physical medicine and *ruḥānī* [spiritual] medicine, which was common in philosophical ethics and the Sufi literature. Masters of spiritual medicine existed as well as masters of physical medicine, and their cures should be monitored regarding this disease. Idrīs Bidlīsī provided names and sometimes general references to express such sources and how he had benefited from them.¹⁴⁷

144 Noah Gardiner, "Esotericist Reading Communities and the Early Circulation of the Sufi Occultist Aḥmad al-Būnī's Works", *Arabica*, 64/3-4 (2017): 435.

145 Mollā Lūṭfi, *Taḍ'if al-madhbaḥ*, *La duplication de l'autel: Platon et le probleme de Delos*, edited by M[e]hmet Şerefettin Yaltkaya, translated by Abdülhak Adnan Adıvar, Henry Corbin (İstanbul: Institut Français d'Archeologie de Stamboul, 1940), 16.

146 The Arabic text of *Taḍ'if al-madhbaḥ* was prepared by Şerefettin Yaltkaya and Henry Corbin and translated to French by Adnan Adıvar (with the exception of the third section. For the Arabic text, see Mollā Lūṭfi, *Taḍ'if al-madhbaḥ*, 21-23.

147 Idrīs Bidlīsī, *al-İbā'*, Āşir Efendi 275, ff. 157a; Şehid Ali Paşa 2033, ff. 98b; III. Ahmed 1473, ff. 87b.

The attitude toward similar remedies toward *ṭā'ūn* is also seen in Shaykh al-Islam Ibn Kemāl. Ibn Kemāl's short *Ṭā'ūn* treatise is a text viewed over the occult culture and explains verses and prayers as well as the way and amount they should be read. In a very small part of this treatise, the function of animal, herbal, and mineral medicine on *ṭā'ūn* is explained very concisely. The treatise can be said to have medical/scientific and spiritual/metaphysical bases like the treatise of Idrīs Bidlīsī, with greater leanings toward the metaphysical side. *Risāla-i Talisman*, in which I will show Ibn Kemāl's occultist tendencies more closely, is also a work that focuses on the subject of *ṭā'ūn* and discusses the relationship between earthquakes and *ṭā'ūn*.¹⁴⁸

Taşköprizâde was another author who was aware al-Biştāmī and Idrīs Bidlīsī's place in the literature. However, while Taşköprizâde mentioned al-Biştāmī *Risālat al-Shifā*, he made no reference to Idrīs Bidlīsī. However, that Taşköprizâde did not address Idrīs Bidlīsī is noteworthy not only regarding the use of occult heritage but also in *Risālat al-Shifā*'s basic premise, framework, and approaches, to a large extent relying on *al-İbā' 'an Mawāqī' al-Wabā'*.¹⁴⁹ Būnī's name is mentioned in four places in the *Risālat al-Shifā*.¹⁵⁰ Būnī's *Shams al-Ma'ārif* is also mentioned as the most reliable source in *Miftāḥ al-Sa'āda*.¹⁵¹ 'Alī b. Shahāb al-Dīn b. Muḥammad al-Hamadānī (d. 786/1385) and Shaykh 'Alī b. Lālā al-Isfarāyīnī (from Egypt) are the sources Idrīs Bidlīsī used; as such, so did Taşköprizâde in the science of *khawāṣṣ*. However, applying occult culture against a disease unable to be overcome within the limits of the dominant medical paradigm should not be the basis for considering Taşköprizâde's treatise as occultist. Moreover, each author made their justification using careful wording stating healing to ultimately be in the hands of Allah and the Quran to be the source of healing; they wanted to legitimize the legal and theological basis of their position. The idea of *al-Fā'il al-Mukhtār*, which is also seen in Taşköprizâde's other works, is consciously repeated at the beginning of the *Risālat al-Shifā*. Therefore, Taşköprizâde's view of occult culture regarding *ṭā'ūn* should be said to be instrumental even when considered together with the positions of Ishrāqī and Waḥdat al-wujūd. Taşköprizâde did not view all occult

148 Ibn Kemāl, *Risāla fi-l-ṭā'ūn wa-l-wabā'*, Süleymaniye Library, Reşid Efendi 1005, ff. 1b–3a. On this treatise, also known as *Rāḥat al-arwāḥ*, and the treatise of talisman, see Ahmet Tunç Şen, "Practicing Astral Magic in Sixteenth-Century Ottoman Istanbul: A Treatise on Talismans Attributed to Ibn Kemāl (d. 1534)", *Magic, Ritual, and Witchcraft* 12/1 (2017): 66–88.

149 The treatise of Idrīs Bidlīsī is two thirds of Taşköprizâde's treatise.

150 Taşköprizâde, *Risālat al-shifā*, 74, 81, 87.

151 Taşköprizâde, *Miftāḥ al-sa'āda wa mişbāḥ al-siyāda fi mevḏū'āt al-'ulūm*, edited by Kāmil Kāmil Bakrī, 'Abd al-Vahhāb Abū al-Nūr (Cairo: Dār al-Kutub al-Ḥādise, 1968), II, 233.

sciences in the same way. While he did include the entire set of sciences and crafts dating back to the Ottoman Empire in the 16th century in his table, he did not ignore the Sunni positions. He discussed the sciences and dealt with them according to certain legal provisions.¹⁵²

(v) When epidemics reach very tragic dimensions, keeping up with all those who've died becomes impossible; but the narrative in treatises regarding funeral services for those who've lost their lives during an epidemic brought an important issue to the agenda. Other aspects of treatises awaiting study are fulfilling the last task toward the deceased as well as the series of ethical and sociological issues that were also seen in the Mamluk period treatises. Many issues such as rights of the sick; laws on the deceased; the demographic, economic, political, civic, and cultural structures and their futures; and urban security in the *Ṭā'ūn* treatises can be the subject of interdisciplinary studies. At this point, credit needs to be given to Idris Bidlisi in particular. Viewing him as a political scientist would not be an exaggeration because of his usage of hadiths regarding abandoning epidemic locales and his approach that brought the debate to this framework. According to him, the Prophet's suggestion to not leave an epidemic's locale is not related to weakening the understanding of fate or to increasing the disease's risk of contagion. If a settlement is completely abandoned in such a situation, neither the family nor the larger social structures and order such as the city can be mentioned.¹⁵³ However, those who can afford to leave the epidemic, as well as those who cannot for reasons such as old age, being alone, or having insufficient financial means will occur. In such chaos, this will cause those left behind during or after the disease to be unable to meet their basic humanitarian needs, to be unable to provide funeral services, and to remain in a position unprotected against threats from nature such as heat, cold, and wild animals. In short, fleeing from an epidemic's locale means those who remain are left to their fate; for Idris Bidlisi and his successor Taşköprüzâde, this cannot serve as a humanitarian or religious explanation.¹⁵⁴ According to the authors of these treatises, another threat resulting from the unconscious migration of an entire society from one place to another during an epidemic is that this psychology will spread to security forces; as a consequence, Islamic lands will be dragged into an environment of insecurity or even captivity, turmoil, and chaos. Therefore, threat detection should be studied

152 Mustakim Arıcı, *Taşköprülüzâde'nin Ahlak ve Siyaset Düşüncesi* (Ankara: Nobel, 2016), 37–43.

153 Idris Bidlisi, *al-İbâ'*, Aşir Efendi 275, ff. 135a; Şehid Ali Paşa 2033, ff. 85a; III. Ahmed 1471, ff. 66b.

154 Idris Bidlisi, *al-İbâ'*, Aşir Efendi 275, ff. 136a; Şehid Ali Paşa 2033, ff. 85b–86a; III. Ahmed 1471, ff. 68a–b; Taşköprüzâde, *Risâlat al-shifâ*, 36.

with extreme accuracy. According to these authors, the remote health threat that may arise from an epidemic does not exceed the security and chaos threats that fleeing will cause.¹⁵⁵

V. Conclusion

The main purpose of this article has been to take an inventory of the *Ṭā'ūn* treatises written in the Islamic world and to also briefly evaluate works from the Mamluk and Ottoman periods through certain characteristics. I can as an introduction say I've partially fulfilled this goal of the article. I've postponed more detailed discussions for the book I will prepare as an expansion of this article.

Ṭā'ūn, *ḥumma*, plague, and *ḥummayāt-ı wabā'* have also been discussed in medical encyclopedic works. Focusing instead on the treatises in this article, I have taken care not to reference these works apart from Ibn Sallūm's *Ghāyat al-Itqān*. A number of problems such as how *ṭā'ūn* is diagnosed and its causes, symptoms, and treatment have been somewhat addressed in these treatises. In this case, when *ṭā'ūn* is the subject of a medical history research, these works should of course be taken into consideration.

Apart from focusing on the literature and its contents through the main axes, I have attempted to explain a terminology issue in the article. Plague (*wabā'* in Arabic) has various meanings. In the medical literature in particular, the meaning of plague as used to accommodate certain types of epidemics has caused the word to be identified with *ṭā'ūn*, which is the most deadly epidemic over time. As can be seen in the article's second section, sources starting from the 8th century have mentioned the intension-and-extension relationship between plague and *ṭā'ūn*, using plague to cover certain types of epidemics, sometimes even all epidemics. *Ṭā'ūn*, known since the birth of Islam, was defined in Arabic medical works at a considerably early period in adherence with the Hippocratic-Galician tradition. According to this medical doctrine, plague is an umbrella term covering many epidemic diseases caused by the corruption of the air, while *ṭā'ūn* is a deadly type of plague/epidemic that spreads to humans and has symptoms in certain parts of the body. Because both concepts are explained based on the same etiology, this intension-and-extension relationship had not always been established in the same way in each work, causing confusing situations to result. I have tried to resolve this conceptual problem in this article.

155 Idris Bidlisi, *al-Ibā'*, Āşir Efendi 275, ff. 135b; Şehid Ali Paşa 2033, ff. 85b; III. Ahmed 1471. ff. 67b; Taşköprizade, *Risālat al-shifā*, 36–7.

One related problem is how to identify the literature. The treatises that discuss the religious and scientific arguments, particularly those on *ṭā'ūn* and the bubonic plague, were written after 1347. However, treatises with *wabā'* and/or *ḥummayāt-i wabā'* [feverish plagues] in their title or non-encyclopedic works discussing these concepts have also taken place in the literature since the first centuries; this even includes written texts containing *ṭā'ūn* in the discussion, such as the treatise from al-Masīḥi. Technically, I think defining the works of authors who use *ṭā'ūn* or *wabā'* in the sense of *ṭā'ūn* as *Ṭā'ūn* treatises to be more correct, with the others being plague treatises. Plague as a medical term in modern Arabic is still used to express epidemics in the most general sense, while in modern Turkish, plague means *ṭā'ūn*. By considering this, I have consciously preferred the composition of *Ṭā'ūn* treatises throughout the article. Accordingly, I think the reader can see what meaning I have referenced both in the article as well as in the list given at the end.

The article has attempted to address the interdisciplinary aspects of the treatises. As can be seen, the literature includes many sub-issues that are of interest not only to those studying the history of medicine but also to those studying Islamic sciences such as hadiths, *kalām*, and *fiqh*. On the other hand, these works have features that can be handled from different perspectives for research in history and political science.

The literature of *Ṭā'ūn*/plague treatises in Europe has been studied much better than the literature produced in the Islamic world. Comparative studies between these two fields of literature will be stimulating in many ways. Finally, I should express the following. These treatises have a very important position for research to be made on the history of epidemics in the Islamic world. Similar literature and monograph studies are needed for other aspects of the history of epidemics.

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Appendices

Appendix I: Literature of Miasma¹⁵⁶

1. Kindī (d. 252/866 [?]), *Risāla fi-l-abḥirat al-muṣliha li al-jaww min al-wabā*.
2. Kindī, *Risāla fi iḍāḥ al-'illa fi-l-samā'im al-qātilat al-samā'iyya*.
3. Kindī, *Risāla fi-l-adwiyat al-mushfiya min al-rawāiḥ al-mu'diya*.
4. Qusṭā Ibn Lūqā, (d. 300/912-13), *Kitāb fi-l-i'dā'*.
5. Qusṭā Ibn Lūqā, *Kitāb fi-l-wabā' wa asbābih*.
6. Abū Bakr al-Rāzī (d. 313/925), *Maqāla fi-l-sabab fi qatl riḥ al-sumūm li-akthar al-ḥayavān*.
7. Abū Bakr al-Rāzī, *al-Risāla al-wabā'iyya*.
8. Abū Ja'far Aḥmad b. Ibrāhīm b. Abī Khālid al-Jazzār (d. 369/979), *Kitāb fi na't al-asbāb al-muwallida li-l-wabā' fi Miṣr wa ṭariq al-ḥile fi daf' dhālika wa 'ilāj mā yutakhawwaf minh*.
9. Abū 'Abd Allah al-Tamīmī (d. after 370/980), *Māddat al-baqā' fi iṣlāḥ fasād al-hawā' wa-l-taḥarruz min ḍarar al-awbā'*.
10. Abū Sehl 'Isā b. Yaḥyā al-Masiḥī (d. 401/1010-11 [?]), *Maqāla fi-l-wabā' (Risāla fi taḥqīq amr al-wabā' wa-l-iḥtirāz minhu wa iṣlāhihi idhā waqa'a)*.
11. Ibn Rıḍwān al-Miṣrī (d. 460/1068 [?]), *Daf' maḍarrat al-abdān bi 'arḍ Miṣr*.
12. Abū al-'Asha'ir Hibat Allah b. Zayn b. Ḥasan b. Jamī' (d. 594/1198), *Ṭab' al-Iskandariyya*.
13. Ya'qūb al-Isrā'īlī (d. 600/1204), *Mizāj-ı Dimashq wa wad'uhā wa tafāwutuhā min Miṣr*
14. 'Abd al-Laṭīf al-Baghdādī (d. 629/1231), *al-Ifāda wa-l-i'tibār fi-l-umūr al-mushāhada wa ḥavādith al-mu'āyana bi 'arḍ Miṣr*
15. Ibn al-Nafis (d. 687/1288), *Kitāb Sharḥ Abidimya*

Appendix II: The Literature of Ṭā'ūn/Plague Treatises

About Literature

After scanning the available catalogs of world libraries, 900-1,000 copies were identified regarding titles containing the concepts of Ṭā'ūn, plague, or related concepts. Among these, the works from Ibn Ḥajar, al-Suyūfī, and Taşköprizāde have the greatest

156 In the statistics in the tables below, the treatises in this title written before 8th/14th century were not taken into account.

numbers of copies. In this annex, the library registration information includes the works that have survived to the present day as manuscripts and lists the work in which the published article or thesis is referenced. I've cited the works I was unable to currently access by referring to the sources in which these works are mentioned. I have not included many copies whose authors could not be identified from the catalogs in this list. Around 50 copies were found that I could not identify from the catalog. I hope to shed some light regarding this in the extended book-version of the article. In addition, I have not included the works collected in the form of pure *Ṭā'ūn* prayers.

In 19th century Iran, more than 30 Persian works are found in which the word plague is mentioned in the title or table of contents, as identified from the Iran Manuscript Libraries Collective Catalog *Fanhā*.¹⁵⁷ However, as far as can be seen, 19th century cholera epidemics in Afghanistan, India, Iran, and the Ottoman Empire had a direct effect in the voluminousness of these writings. These epidemics are known to have had greater impact in Iran. In this century, the word plague was used in Persian to indicate cholera.¹⁵⁸ As a matter of fact, *Mu'ālaca-i Maraḡ-i Wabā*¹⁵⁹ was written by the physician Jakob Eduard Polak (1818-1891) on cholera and *'Arīza-yi Ma'mūrīn ba Pādishāh-i Engīlis*¹⁶⁰ was written by the physician Fortunato Casolani (1819-1852); both have some plague-themed studies related to cholera. They can be argued to have been discussing *ṭā'ūn* in a way. However, I did not find including these works on this list to be appropriate. However, I have included on the list the available Persian works written directly on *Ṭā'ūn* and their related statistics.

1. Ibn Abī al-Dunyā (d. 281/894) *Kitāb al-Ṭawā'in*. For citations see Ibn Ḥajar, *Badhl al-mā'ūn fī faḡl al-ṭā'ūn*, 113, 238, 279.

2. Ibn al-Wardī, Abū Ḥafṣ Zayn al-Dīn 'Umar b. al-Muẓaffer b. 'Umar al-Bakrī al-Qurashī al-Ma'arrī (d. 749/1349), *Maqāma fī-l-ṭā'ūn al-'ām*, edited by Aḡmad Fāris al-Shidyāq, in *Majmū'at al-javā'ib* (İstanbul, 1300), 184-188.

3. Ḥasan b. 'Alī al-Khaṭīb al-Qustantinī (d. 750/1349-50), *al-Maṣnūn fī aḡkām al-ṭā'ūn*. See Ibn Qunfuz, *al-Wafayāt*, edited by Ādil Nūveyhiz (Beirut: Dār al-Āfāk al-Jadīda, 1971), 355.

157 Dirāyeti, *Fihristgān nuskahā-yi khaṭṭī Irān*, XIV, 219; XIV, 219; XVI, 635; XXI, 280; XXII, 626; XXIII, 839; XXIV, 759; XXV, 542; XXIX, 453; XXX, 193-194, 775; XXXI, 423; XXXI, 859; XXXIII, 73; XXXIV, 200-203.

158 "In Persian cholera was usually called wabā (*wabā'*), the term for any epidemic disease, but sometimes also *hayza*." <https://iranicaonline.org/articles/cholera-disease>.

159 Dirāyeti, *Fihristgān nuskahā-yi khaṭṭī Irān*, XXX, 193; <https://iranicaonline.org/articles/polak-jakob-eduard>.

160 Dirāyeti, *Fihristgān nuskahā-yi khaṭṭī Irān*, XXII, 626.

4. Aḥmad b. Ibrāhīm b. Şafwān al-Mālakī (d. 763/1361-62), *Kitāb al-ṭā'ūn*.
5. Muḥammad b. Ja'far b. Müshtamil al-Aslamī al-Balyānī al-Marī al-Andalusī (d. 764/1362-63), *Işlāh al-niyya fi-l-mas'alat al-ṭā'ūniyya, al-Durr al-maknūn fi mas'alat al-ṭā'ūn* (al-Maktaba al-Azhariyya, Majāmi' al-Maghāriba, 2061).
6. Şalāh al-Dīn Ḥalīl b. Aybek al-Şafadi (d. 764/1362-63), *Maqāla fi-l-wabā'*. Kātib Çelebi, *Kashf al-zunūn*, II, 1574.
7. Abū Ja'far Aḥmad b. 'Alī b. Muḥammad b. Khātima al-Anşārī al-Marī al-Andalusī (d. 770/1369), *Taḥşīl gharāḍ al-qāşid fi tafsil al-maraḍ al-wāfid, Thalās Rasā'il Andalusiyya fi-l-ṭā'ūn*, edited by Muḥammad Ḥasan, (Carthage: al-Majma' al-Tunusi li al-'ulūm al-ādābi wa-l-funūn, 2013).
8. Tāj al-Dīn 'Abd al-Wahhāb b. 'Alī b. 'Abd al-Kāfi-l-Subkī (d. 771/1370), *Juz' fi-l-ṭā'ūn*. See *Kashf al-zunūn*, I, 876.
9. Waliyy al-Dīn Muḥammad b. Aḥmad b. 'Uthmān al-Dībācī al-Millawī (d. 774/1373), *Ḥall al-ḥubā l'irtifā' al-wabā'* (Süleymaniye Library, Reisülküttāb 54, ff. 234a-237a). Also see Bağdatlı İsmail Pasha, *Hadiyya al-'arīfin*, II, 166.
10. Muḥammad b. 'Abd al-Raḥmān Ḥusayin al-Uthmānī (d. after 775/1374), *Shifā' al-qalb al-maḥzūn fi bayān mā yata'allaq bi-l-ṭā'ūn* (Süleymaniye Library, Hüsrev Paşa 258, ff. 1b-50b, h. 775).
11. Ibn Abī Ḥajala, Abū al-'Abbās Shihāb al-Dīn Aḥmad b. Yahyā b. Abī Bakr b. 'Abd al-Wāhid al-Tilimsānī (d. 776/1375), *al-Tibb al-masnūn fi-l-ṭā'ūn* (Topkapı Palace Library. Revan Köşkü 1195; Dār al-Kutub al-Mişiyya, 7/588, 8438).
12. Since we could not make a comparison between the author's work named *Daf' al-niqma bi-l-şalā 'alā nabī al-raḥma fi tafsil aḥwāl al-ṭā'ūn* (Süleymaniye Library, Laleli 861) and *al-Tibb al-maşnūn fi-l-ṭā'ūn*, we could not determine whether these were the same works.
13. Lisān al-Dīn Ibn al-Khaṭīb (d. 776/1374-75), *Muqni'at al-sā'il 'an al-maraḍ al-hā'il, thalāth rasā'il Andalusiyya fi-l-ṭā'ūn*, edited by Muḥammad Ḥasan, (Carthage: al-Macma' al-Tunusi li al-'ulūm al-ādābi wa-l-funūn, 2013).
14. Surramarri, Abū al-Muẓaffar Jamāl al-Dīn Yūsuf b. Muḥammad, (d. 776/1374), *Dhikr al-wabā' wa-l-ṭā'ūn*, edited by Shewket b. Rıfki b. Shewket (Oman: Dār al-Asariyya; Damascus: Dār al-Muḥabbe, 1425/2005).
15. Abū 'Abd al-Allah Muḥammad b. 'Alī al-Lakhmī al-Shakūri (d. after 776/1374), *Taḥqīq al-naba' 'an amr al-wabā'*; Shakūri, *Taqyid al-naşīha, Thalāth rasā'il Andalusiyya fi-l-ṭā'ūn*, edited by Muḥammad Ḥasan, (Carthage: al-Mecma' al-Tunusi li al-'ulūm al-ādābi wa-l-funūn, 2013).

16. Abū ‘Abd al-Allah Muḥammad b. Muḥammad al-Manbijī (d. 785/1383), *Kitāb al-ṭā‘ūn wa ahkāmuh*, edited by Aḥmad b. Muḥammad b. Ghānim Āl-i Sānī (Doha: Rawāyā li al-Dirāsāt wa-l-Buhās; Beirut: Dāru Ibn Hazm, 1438/2017).

17. Abū ‘Abd al-Allah Bedr al-Dīn Muḥammad b. Bahādır b. ‘Abd al-Allah al-Turkī al-Mıṣrī al-Minhāji al-Zarkashī al-Shāfiī (d. 794/1392), *Juz’ fi-l-ṭā‘ūn*. See Kātib Çelebi, *Kashf al-ẓunūn*, I, 876.

18. Ibn Haydūr Abū al-Ḥasan ‘Alī b. ‘Abd al-Allah al-Fāsī al-Tādili (d. 816/1413), *al-Maqāla al-ḥikmiyya fi-l-amrāḍ al-wabā‘iyya*. (Khiḍānat al-Üstāz al-Manūnī, 3/455, ff. 36-49).

19. ‘Umar b. ‘Alī al-Ḥacc al-Saīdī al-Mālakī (d. after 844), *Maqāma fi amr al-wabā’*. Shihāb al-Dīn al-Maqqarī al-Tilimsānī al-Fāsī (d. 1041/1632) *Azhār al-riyāḍ fi akhbār Iyāḍ* (edited by Muṣṭafa al-Sakkā et al. Rabat: Iḥyā al-Turāth al-Islāmī, 1978/1398) I, 125-132.

20. Ibn Hajar al-‘Asqalānī (d. 852/1449), *Badhl al-mā‘ūn fi faḍl al-ṭā‘ūn*, edited by Aḥmad Isām ‘Abd al-Qadīr al-Kātib (Riyadh: Dār al- Āsıma, 1991).

21. Zayn al-Dīn ‘Abd al-Raḥmān al-Sālihi al-Dımashqī (d. 856/1452-53), *Tasliyat al-wājim fi-l-ṭā‘ūn al-ḥājim*.

22. ‘Abd al-Raḥmān b. Muḥammad b. ‘Alī b. Aḥmad al-Anṭaqī al-Biṣṭāmī (d. 858/1454), *Waṣf al-dawā’ fi kashf āfāt al-wabā’*, edited by ‘Abd al-Ḥamid Şālih Hamdān (Paris: Dār al-Elifbā, 1988).

23. ‘Abd al-Raḥmān al-Biṣṭāmī, *al-Adwiya al-muntakhaba fi-l-adwiya al-mujarrab* (Süleymaniye Library, Reisülküttāb 1205, ff. 49-77).

24. Abū ‘Amr Muḥammad Ibn Manzūr al-Qaysī (d. 864/1460), *Waṣıyyat al-nāşih al-awadd fi-l-taḥaffuz min al-maraḍ al-wāfid* (Khiḍānat al-Ustādh al-Manūnī, 45, 1-23).

25. Abū al-Baqā’ ‘Alam al-Dīn Şālihi b. ‘Umar b. Raslān al-Kinānī al-Bulqīnī (d. 868/1464), *Izhār al-nabā’ fi su‘al ref’ al-wabā’* (Süleymaniye Library, Esad Efendi 1415/5).

26. Abū Zakariyyā Sharaf al-Dīn Yaḥyā b. Muḥammad b. Muḥammad b. Muḥammad al-Ḥaddādī al-Münāvi al-Qāhiri (d. 871/1467), *Mukhtaşar Badhl al-mā‘ūn*. See Kātib Çelebi, *Kashf al-ẓunūn*, I, 237.

27. ‘Abd al-Qāhir b. Muḥammad b. ‘Alī al-Sharīf al-Tunūsi (d. ?), *Kitāb al-Ṭıbb fi tadbir al-musāfirin wa maraḍ al-ṭā‘ūn* (Süleymaniye Library, Ayasofya 4814, 55-101, h. 899, İstanbul).

28. Mollâ Luṭfî (d. 900/1495), *Taḍ'îf al-madhbaḥ*, *La duplication de l'autel: Platon et le probleme de Delos*, edited by M.[ehmet] Şerefettin Yaltkaya; translated by Abdülhak Adnan Adivar and Henry Corbin (İstanbul: Institut Français d'Archeologie de Stamboul, 1940).

29. Muḥammad b. Aḥmad Sharaf al-Dîn al-Shâfi'î al-Shabustarî (d. ?), '*Umdat al-udabâ' fi daf' al-tā'ūn wa-l-wabâ'* (Süleymaniye Library, Ayasofya 387, ff. 26b-59a, h. 904 Shaban; Bibliotheque Nationale, Arabe 3019).

30. Ibn Abî Sharîf, Abû al-Ma'âlî Kamâl al-Dîn Muḥammad b. Muḥammad b. Abî Bakr al-Maqdisî (d. 906/1500), *Risâla fi-l-tā'ūn* (Maktaba al-Baladiyya al-Iskandariyya, Medicine 12).

31. Ibn al-Mubarrad, Abû al-Maḥâsin Jamâl al-Dîn Yûsuf b. Ḥasan b. Aḥmad al-Maqdisî (d. 909/1503), *Funûn al-munûn fi wabâ' wa-l-tā'ūn*, edited by 'Abd al-Mecîd Jum'a ([Algeria]: Markazu Dirâsât al-Ibâne, Dâr al-Salafi al-Şâliḥ, 2020).

32. al-Suyûṭî (d. 911/1505), *Mâ rawâhu al-wā'ūn fi akhbâr al-tā'ūn*, edited by Muḥammad 'Alî al-Bâr (Damascus: Dâr al-Qalem, 1418/1997).

33. Muştafâ Awḥad al-Dîn Yarhisarî (d. 911/1505), *Risâlat al-wabâ' wa javâz al-firâr 'anh*. See Kâtib Çelebi, *Kashf al-ẓunûn*, I, 897.

34. İlyâs b. İbrâhîm (d. after 918/1512) *Mijannat al-tā'ūn wa-l-wabâ'* (Süleymaniye Library, Esad Efendi 2483, ff. 28a-42b).

35. Zakariyyâ al-Ansarî (d. 926/1519) *Tuḥfat al-râghibîn li bayân amr al-tavâ'in*, (Süleymaniye Library, Âşir Efendi 439, ff. 161-176; Süleymaniye Library, Esad Efendi 3567, ff. 63-73).

36. İdris Bidlisî (d. 926/1520) *al-İbâ' 'an mawâqî' al-wabâ'* (Süleymaniye Library, Şehit Ali Paşa 2033, 61b-103a, h. 933; Süleymaniye Library, Âşir Efendi 275, 101b-160b, h. 1184; Topkapı Palace Library, III. Ahmed 1471).

37. Ibn Kemâl (d. 940/1534), *Risâla fi-l-tā'ūn wa-l-wabâ'* (Süleymaniye Library, Reşid Efendi 1005, ff. 1b-3a).

38. Ibn Tûlûn, Abû al-Faḍl (Abû 'Abdallah) Shams al-Dîn Muḥammad b. 'Alî b. Aḥmad b. Tûlûn al-Dımashqî (d. 953/1546), *Tuḥfat al-nujabâ' bi aḥkâm al-tā'ūn wa-l-wabâ'*. See Kâtib Çelebi *Kashf al-ẓunûn*, I, 376.

39. Jamâl al-Dîn Muḥammad b. Abî al-Ḥasan Muḥammad b. Muḥammad al-Bakrî al-Şiddîqî al-Shâfi'î al-Ash'arî (d. 952/1546), *Su'âl fi-l-tā'ūn wa javâbuh* (Süleymaniye Library, Laleli 1872; al-Maktabat al-Zâhiriyye, 83); *al-Tā'ūn wa-l-wabâ'*. See *Fanhâ*, XXII, 15.

40. Shams al-Dîn Muḥammad b. Muḥammad al-Ṭrablusî al-Ru'aynî (d. 954/1547), *al-Bashâra al-haniyya bi anna al-tā'ūn lâ yadhul Makka wa-l-Madina*. See Bağdatlı

İsmail Pasha, *Hadiyyat al-‘arifin*, I, 242; *al-Qawl al-mubîn fi anna al-ṭā‘ün lâ yadhkul al-balad al-amîn*, Bağdatlı İsmail Pasha, *Hadiyya al-‘arifin*, I, 242.

41. Shams al-Dîn Muḥammad b. Muḥammad al-Ṭrablusi al-Ru‘aynî, ‘*Umdat al-rāwîn fi aḥkâm al-tawā‘în* (National Library of Medicine, MS. A. 80, ff. 1a-40b).

42. Taşköprüzâde Aḥmed Efendi (d. 968/1561), *Risâlat al-shifâ li adwâ’ al-wabâ’* (Egypt: Matba‘at al-Vahbiyya, 1292).

43. Zayn al-Dîn b. İbrâhîm b. Muḥammad al-Mışrî Ibn Nujaym (d. 970/1563), *Risâla fi-l-ṭā‘ün*, (Süleymaniye Library, Bağdatlı Vehbi 2111, ff. 47a-50b; Süleymaniye Library, Esad Efendi 848, ff. 68a-70a; Süleymaniye Library, Fatih 1656, ff. 11b-15a).

44. Abü ‘Abbâs Shihâb al-Dîn Aḥmad b. Muḥammad b. Muḥammad al-Haythamî al-Sa‘dî (d. 974/1567), *Maqâla fi bayân al-firâr min al-ṭā‘ün wa-l-wabâ’* (Süleymaniye Library, Esad Efendi 2483, ff. 54-55).

45. Nidâ’î Meḥmed Çelebi Ankaravî (d. after 975/1567), *Rabî‘u al-salâma*. Nuray Demir Öztürk, 16. *Yüzyılda Veba Üzerine Yazılmış Bir Tıp Eseri: Nidâ’înin Rebî‘u’s-Selâme’si* (Ankara: Grafiker Yayınları, 2021).

46. Abü al-Mawâhib Najm al-Dîn Muḥammad b. Aḥmad b. ‘Alî b. Abî Bakr al-Ghaytî (d. 981/1573-74), *Sü‘âl al-Ghaytî wa javâbuhü fi-l-ṭā‘ün* (al-Maktabat al-Ezheriyye, Mecâmi‘ al-Etrâk, 1728).

47. ‘Abd al-Ghani b. Emirshâh b. Maḥmûd al-Geredevi (d. 995/1586), *Risâla fi ḥakk al-ṭā‘ün* (Manisa İl Halk Library, 1504, ff. 9b-29a; ‘Aşîr Efendi, 275, ff. 74b-100a). This work is a shortened translation of Taşköprüzâde’s treatise.

48. Muḥammad b. Muḥammad al-‘Uqaylî al-Shâfî al-Khalwatî (d. 1001/1592-93), *Bayân mâ yaktafi bih al-sâ‘ün fi fahmi amr al-ṭā‘ün* (Maktabat Dâr al-‘ulûm, 58).

49. Zayn al-Dîn Muḥammad ‘Abd al-Ra‘ûf b. Tâj al-‘Arifin b. Nûr al-Dîn ‘Alî al-Munâvî al-Ḥaddâdî (d. 1031/1622), *Manhât al-ṭâlibîn li ma‘rifati asrâr al-tavâ‘în*. See Bağdatlı İsmail Pasha, *Hadiyya al-‘arifin*, I, 511; Bağdatlı İsmail Pasha, *İdâḥ al-meknûn*, II, 578.

50. Zayn al-Dîn Mar‘î b. Yûsuf b. Abî Bakr b. Aḥmad b. Abî Bakr al-Karmî (d. 1033/1624), *Tahqîq al-ẓunûn bi -akhbâr al-ṭā‘ün*, edited by Jamâl ‘Abd al-Raḥîm al-Fâris, *Majmû‘ rasâ’il al-‘allâme Mar‘î al-Karmî al-Ḥanbalî*, edited by Muḥammad Barakat et al. (İstanbul: Dâr al-Lubâb, 2018/1439), IV.

51. The work of the author, which is called *Mâ yaf‘ aluh al-aṭibbâ’ wa-l-dâ‘ün li-daf‘i sharr al-ṭā‘ün* in the sources (*Osmanlı Tıbbi Bilimler Literatürü*, I, 226) , is probably the same as the first one.

52. Fatḥ Allah b. Maḥmūd al-Baylūnī al-Ḥalabī (d. 1042/1632), *Khulāsat mā yaḥşul 'alayh al-sā'ūn fī adwiyat daf'i al-wabā'i wa-l-ṭā'ūn* (Süleymaniye Library, Laleli 1646, ff. 103-131, h. 1028); *Risāla fī aḥvāl al-ṭā'ūn*, (Maktabatu Cāmi'at al-Kuveyt, 700, 997).

53. Nūḥ b. Muştafa (d. 1070/1660), *Raf' al-ḡunūn 'an haqīqat al-ṭā'ūn* (İstanbul University Nadir Eserler Library, Turkish Manuscripts, 2267, 216b-263b).

54. Şāliḥ b. Naşrallah Ibn Sallūm (d. 1080/1669), *Tarjamat al-Risāla fī-l-ḥummayāt al-radī'a wa-l-wabā'iyya* (Bayezit Yazma Eser Library, Veliyyüddin Efendi 2520, ff. 301a-308b).

55. Kızılhisarlı Ḥibrī 'Alī Efendi (d. after 1090/1679), *al-Fawā'id al-Ḥibrīyye fī-l-ṭā'ūn wa-l-wabā'* (Süleymaniye Library, Serez 2757; Topkapı Palaca Library, Revan 1692).

56. Muḥammad b. 'Atīq al-Ḥimşī (d. 1088/1677), *Khulāsat mā rawāhū al-wa'ūn fī-l-akḥbār al-wārida fī-l-ṭā'ūn* (Burdur İl Halk Library, 1090/2). See *Osmanlı Tıbbi Bilimler Literatürü*, I, 283-284.

57. İbrāhīm b. Abī Bekr İsmā'il al-Dhanābī al-'Awfī (d. 1094/1683), *Ḥadā'iq al-'uyūn al-bāsira fī akḥbār aḥwāl al-ṭā'ūn wa-l-ākḥira* (Dār al-Kutub, 37648).

58. Shihāb al-Dīn Aḥmad b. Muḥammad al-Makki al-Ḥamavī al-Ḥanafī (d. 1098/1687), *al-Durr al-maknūn fī-l-kalām 'ala al-ṭā'ūn* (Süleymaniye Library, Bağdatlı Vehbi 2105, h. 1097, copied h. 1172, ff. 1-7; Süleymaniye Library, Reisülküttāb 1148, ff. 167-172).

59. Ḥayātizāde Muştafa Feyḍī (d. 1103/1692), *Risāla-i Ḥumma al-Radī'a* (Hacı Selim Ağa Library, Hacı Selim Ağa 868, ff. 112b-150b).

60. Sayyid Ni'mat Allah b. 'Abd Allah b. Muḥammad al-Mūsavī al-Ḥusaynī al-Jazā'irī al-Tusterī (d. 1112/1701), *Musakkin al-shujūn fī-l-firār min al-ṭā'ūn*. For manuscripts in Iran See *Fanhā*, XXIX, 452-53.

61. Şadr al-Dīn Shirwānizāde Meḥmed Şādık Efendi (d. 1121/1709), *Risāla muta'allīqa bi mabda' al-ṭā'ūn* (Dār al-Kutub wa-l-Wathā'iq al-Mışriyya, Majāmi', 183).

62. Muḥammad b. Aḥmad al-Ḥājj al-Jazā'irī (d. 1128/1715), *Risālat al-mann wa-l-salwā fī ḥadīth lā adwā / Mas'ala fī ḥukm al-adwā'* (al-Khizānat al-Mālikiyye, Rabat, 12369, ff. 79-95). See Stearns, *Infectious Ideas*, s. 142, 230.

63. 'Abd al-Ghanī b. İsmā'il b. 'Abd al-Ghanī b. İsmā'il al-Nāblusī (d. 1143/1731), *Qaşıda fī-l-ṭā'ūn* (al-Maktabatu al-Zāhiriyye, 11306); *Risāla fī-l-ṭā'ūn* (Staatbibliothek, Landberg, 880).

64. Aḥmad b. al-Mubārak al-Sijilmāsi al-Lamti (d. 1156/1743), *Jawāb 'amma ḥalla bi bilādihim ṭā'ūn* (al-Khizānat al-'Āmma bī al-Rabaṭ, D 1348). See *Fihrist al-makhtūt*

al-'Arabiyya al-mahfūz fi-l-Khizāna al-Āmma bi-l-Rabaṭ, Y. S. Allush, 'Abd Allah al-Rajrāji (Rabat: Khizānat al-Āmma li-l-Kutub wa-l-Wathā'iq, 2001/1421), II, 355.

65. Muḥammad Şālih Bidlisi (d. 18th century), *Hışn al-wabā'* (Süleymaniye Library, Esad Efendi 2484).

66. Quṭb al-Dīn Muştafā b. Kemāl al-Dīn al-Bakrī al-Ḥalebī (d. 1162/1749), *Sirr al-sā'un fi daf' al-ṭā'un* (Süleymaniye Library, Ātīf Efendi 2798, ff. 53-63)

67. Abū 'Abd Allah Muḥammad al-Shabbī al-Ḥāmīdī al-Sūsī (d. 1163/1749), *Rāḥat al-insān fi ṭibb al-abdān*, See Stearns, *Infectious Ideas*, 143, 230.

68. Muḥammad b. al-Ḥasan al-Banānī al-Fāsī al-Mālīkī (d. 1194/1780), *Risāla fi-l-tā'n wa-l-tavā'in / Taqyid fi-l-ḥadīth 'an wabā'i al-ṭā'un* (Maktabat 'Abdallah Kanūn (Tanca), 10330). *Risāla fi aḥkām al-ṭā'un* (al-Khizānat al-Āmma bi al-Rabaṭ, D 1854).

69. Ṭabīb Muḥammad Bāqir Muḥammad Ḥusayin (d. 12th/18th century), *Tabkhā (Ḥummeyāt)*. See *Fanhā*, VI, 886.

70. Mustaqimzāde Süleyman Sā'd al-Dīn (d. 1202/1788), *Jihāz al-ma'jun fi-l-khalās min al-ṭā'un* (Süleymaniye Library, Esad Efendi 1329, ff. 42b-49a; Dār al-Kutub wa-l-Wathā'iq al-Mışriyya, Majāmi' 105/10, 837).

71. Uthmān b. Mūsā Eskişehrī (d. after 1210/1795), *al-Mā'un fi mas'alat al-ṭā'un* (Bağdatlı Vehbi Efendi, 1370; İzmir Milli, 1887).

72. Muḥammad Maḥdi Baḥr al-'ulūm (d. 1212/1797-98), *al-Risāla al-ṭā'uniyya*. See *Fanhā*, XVI, 531.

73. Uthman b. Aḥmad al-Fartakī al-Niğdevī (d. 1215/1800-1801), *Risāla fi 'ilāj al-ṭā'un* (Cāmi'at al-Īmām Muḥammad b. Sa'ūd, 7363).

74. Gevrekzāde Ḥasan Efendi (d. 1216/1801), *Tarjama-i Mijannat al-ṭā'un*. Ertuğrul Tan, "XVIII. Yüzyılda Osmanlılarda Vebâ: Örnek Bir Çalıřma Olarak Gevrekzāde Hâfız Hasan Efendi'nin "Micennetü't-Tâ'un ve'l-vebâ" İsimli Çalıřması", PhD Thesis, Karadeniz Technical University, 2016.

75. İbn 'Aciba, Abū al-'Abbās al-Shāzālī (d. 1224/1809), *Sulūk al-durar fi dhikr al-kaḍā wa-l-qadar* (al-Khizānat al-Āmma bi al-Rabaṭ, D 1854, 1-22), See Stearns, *Infectious Ideas*, 143, 230.

76. Muḥammad b. Aḥmad al-Rahūnī (d. 1230/1814), *Javāb fi aḥkām al-ṭā'un / Ajwiba 'alā mas'āli ḥawla wabā'i al-ṭā'un* (al-Khizānat al-Āmma bi al-Rabat, D 2251, ff. 1-48), See Stearns, *Infectious Ideas*, 143, 230.

77. Muḥammad b. Abī al-Qāsım al-Filālī (d. after 1252/1836), *Risāla fi man ḥalla bi 'arḍihim al-tā'ūn hal yaḗuzu lahum al-khurūj am lā* (al-Khizānat al-Āmma bī al-Rabaṭ, D 2251, ff. 49-79). See Stearns, *Infectious Ideas*, 143, 230.

78. Muḥammad b. Muḥammad b. Ḥusayın al-Tūnusī (d. 1246), *Ḥusn al-naba' fi jawāz al-taḥaffuḗ min al-wabā'*, Baḡdatlı İsmail Pasha, *Idāḥ al-maknūn*, I, 405.

79. Ḥamdān b. 'Uthmān Khoja al-Jazā'iri (d. 1257-58/1842), *Itḥāf al-munsiḗin wa-l-udabā' bī mabāhith al-iḥtirāz 'an al-wabā'* (İstanbul: Dār al-Ṭibā'at al-Āmira, 1254), p. 1-56.

80. Ḥamdān b. 'Uthmān Khoja al-Jazā'iri, *Thanā' al-itḥāf* (İstanbul: Dār al-Ṭibā'at al-Āmira, 1254), p. 58-139.

81. Antoine-Barthelemy Clot Bey (1793-1868), *Risāla fi 'ilāj al-tā'ūn*, *Tanbih fi mā yakhuḗḗ al-tā'ūn*, See *Fihrist al-Maktabat al-Hudaywiya*, VI, 10, 17.

82. Aḥmad Tawḥid Efendi (1802-1869), *Badhl al-mā'ūn fi jawāz 'an-khurūj 'an al-tā'ūn* (İstanbul University, Cerrahpaḗa Tıp Tarihi Library, 225).

83. Fatḥ Allah b. Muḥammad Rıḗā Mar'ashi Shushtari (d. 1292-93/1876), *Manāfi' al-aḥibbā' fi-l-tā'ūn wa-l-wabā'*. See *Fanhā*, XXXI, 610.

84. Muḥammad b. al-Madani b. 'Ali Junūn (d. 1302/1884), *Kalām al-a'imma 'alā ḥadith lā 'adwā'* (al-Khizānat al-Āmma bī al-Rabaṭ, D 640 (791), ff. 46-110). See Stearns, *Infectious Ideas*, 143, 230.

85. Aḥmad al-Shāmī 'Umari (d. after 1894), *Tawfiqāt al-Ḥamidiyya fi daf' al-amrād al-wabā'iyya*. Nükhet Varlık, "The Study of a Plague Treatise Tevfikātül-Hamidjyye Fi Def'ül-Emrāzi'l-Vebā'iyye", MA Thesis, Boḡaziçi University, 2000.

86. al-'Arabī al-Mashrafi-l-Garisi (d. 1313/1895), *Aqwāl al-matā'in fi-l-tā'ūn wa-l-tawā'in* (al-Khiḗānat al-Mālikiyye, Rabat, 2054, ff. 1-131). See Stearns, *Infectious Ideas*, 143, 230.

87. Mūsā b. 'Ali Rıḗā Sāwaji (d. 19th century), *Dustūr al-aḥibbā' fi daf'i al-tā'ūn wa-l-wabā'*. See *Fanhā*, XIV, 565-66.

88. 'Ali b. Muḥammad Ja'far Astarābādi (1827-1898), *Safīna-i Nūḥ*. See *Fanhā*, XVIII, 293.

89. Muḥammad Rıḗā Ṭabāṭabāi (d. 19th century), *Tā'ūn*. See *Fanhā*, XXII, 15.

90. Abū al-ūlā Muḥammad 'Abd al-Raḥmān b. 'Abd al-Raḥīm al-Mubārakpūri (1865-1935), *Khayr al-mā'ūn fi man' al-fırār min al-tā'ūn*, See "Mübārekpūri", *DĪA*, XXXI, 428-29.

91. Muḥammad b. Abī al-Qāsim al-Sijilmāsī (d. ?), *Taqyīd fī-l-ṭā'ūn* (al-Khizāna al-Ḥasaniyya (al-Qaṣr al-Maliki), 3626, 3627).

92. Aḥmad b. Muṣṭafa b. Aḥmad al-Sāwī (d. ?) *Risāla al-Sāwī fī-l-ṭā'ūn* (al-Maktaba al-Miṣriyya, 5475).

Appendix III: Statistics on Ṭā'ūn/Plague Treatises with Identified Authors

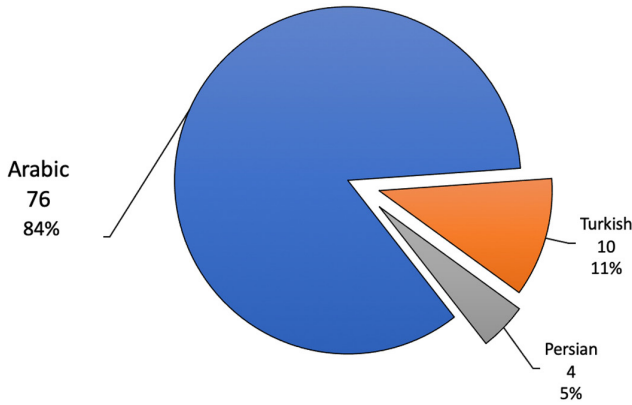


Figure 1. Range of treatises with identified authors according to languages in which they were written.

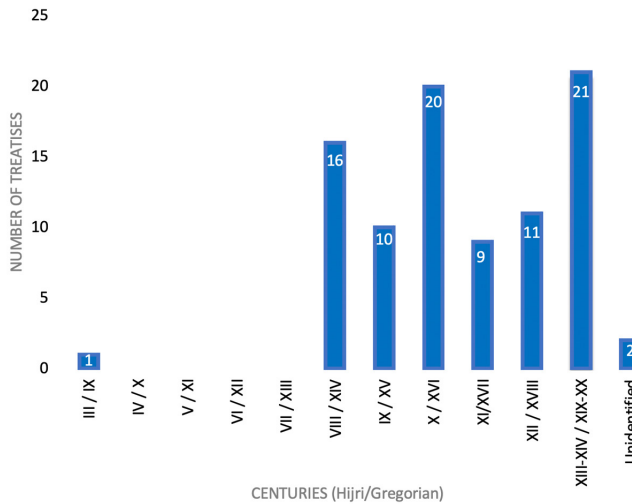


Figure 2. The range of treatises with identified authors according to century.

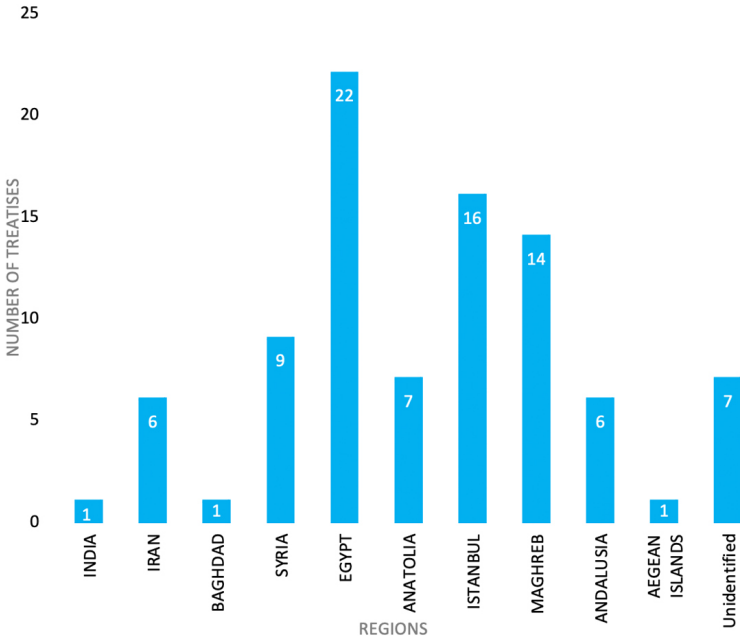


Figure 3. Range of the treatises whose authors were identified according to the region they were written.

Appendix IV: Ottoman Scholars Who Died Due To *Ṭā'ūn*/Plague (This list contains only two of *Shaqā'iq*'s supplementary scholars).¹⁶¹

1	al-Mawlā 'Abd al-Bāqī (Fenārīzāde Bāqī Çelebi)	<i>HH</i> , I, 321
2	al-Mawlā 'Abd al-Bāqī ('Arabzāde 'Abd al-Bāqī Çelebi)	<i>HH</i> , I, 328
3	al-Mawlā Muştafā (Makhdūmi Qāđızāde) {Hilmī}	<i>HH</i> , I, 522
4	al-Mawlā Meḥmed b. Ḥusām (Kayın Çelebi)	<i>HH</i> , I, 579
5	al-Mawlā İbrāhīm (Mu'allimi Sulṭān Murād İbrāhīm Efendi)	<i>HH</i> , I, 631
6	al-Mawlā Meḥmed b. 'Alī (Birgili Meḥmed Efendi)	<i>HH</i> , I, 632

161 Abbreviation: *HH* ('Aṭā'ī, *Ḥadā'iq al-ḥaqā'iq*); *ZS* (Ushākīzāde, *Zeyl al-Shaqā'iq*)

7	al-Mawlā Meḥmed b. Muṣṭafā al-Shahīr bī-Niksārizāde (Niksārizāde Meḥmed Efendi)	<i>HH</i> , I, 637
8	al-Mawlā ‘Abd al-Karīm b. Meḥmed Çelebi (Ebūlsu‘ūd zāde oğlu ‘Abd al-Kerīm Çelebi)	<i>HH</i> , I, 639
9	Sulṭān Selīm Hān Thānī {Selimī}	<i>HH</i> , I, 721
10	al-Mawlā ‘Abd al-Raḥmān (Alemşāh Çelebi)	<i>HH</i> , I, 796
11	al-Mawlā Qāsım (Qāsım Çelebi Ibn Hācī Efendi)	<i>HH</i> , II, 1090
12	al-Mawlā Meḥmed (Kınalızāde Fehmī Çelebi) {Fehmī}	<i>HH</i> , II, 1093
13	al-Mawlā Mes‘ūd (Hācezāde Mes‘ūd Çelebi)	<i>HH</i> , II, 1102
14	al-Mawlā Hāmid (Makhdūm-i Taşköprizāde)	<i>HH</i> , II, 1105
15	al-Mawlā Meḥmed (Qudsi Efendi)	<i>HH</i> , II, 1611
16	al-Mawlā ‘Abd al-Hādī (Remzizāde ‘Abd al-Hādī Çelebi)	<i>HH</i> , II, 1318-19
17	al-Mawlā Meḥmed (Shaykh Meḥmed Çelebi Ibn Sun‘ Allah Efendi)	<i>HH</i> , II, 1358
18	al-Mawlā Meḥmed (Atūfī Efendi) {Atūfī}	<i>HH</i> , II, 1369
19	al-Mawlā Sheykh Meḥmed (Makhdūm-ı Kemāl Efendi)	<i>HH</i> , II, 1380
20	al-Mawlā Meḥmed (Ḥasan Kethūdāzāde Efendi)	<i>HH</i> , II, 1404
21	al-Mawlā Aḥmad (Emīr Aḥmad Çelebi) {Nesibī}	<i>HH</i> , II, 1436
22	al-Mawlā Dervīş Meḥmed (Makhdūm-i Kihther-i Sun‘ Allah Efendi)	<i>HH</i> , II, 1443
23	al-Mawlā Meḥmed Zemān (Meḥmed Zemān Efendi)	<i>HH</i> , II, 1449
24	al-Mawlā al-Fāḍil Meḥmed Efendi Ibn al-Mawlā Sa‘d al-Dīn (Hācezāde Meḥmed Efendi)	<i>HH</i> , II, 1475
25	Meḥmed Çelebi	<i>HH</i> , II, 1484

26	al-Mawlā Aḥmad (Ḥibri Çelebi) {Ḥibri}	HH, II, 1488
27	al-Mawlā Maḥmūd (Niksārızāde Efendi) {Niksāri}	HH, II, 1493
28	al-Mawlā Sa'īd (Kara Sa'īd)	HH, II, 1509
29	al-Mawlā 'Alī (Edibī Çelebi) {Edibī}	HH, II, 1585
30	al-Shaykh Abū al-Ghayth (Abū al-Ghayth al-Kashāsh)	HH, II, 1631
31	Hāci Yūsufzāde Zamīri Efendi [Aḥmad] {Zamīri}	ZS, 345
32	Sıyāmī Efendi [İplikci Sıyāmī]	ZS, 383
33	Ḥüsāmzāde Es'ad Efendi	ZS, 476
34	Qudsizāde Meḥmed Efendi {Şeyhi} Makhdūmları [Meḥmed]	ZS, 676
35	Naqīb al-Eshrāf Zeyrekzāde al-Seyyid 'Abd al-Raḥmān Efendi makhdūmları Āsım Çelebi {Āsımī}	ZS, 695
36	Shāmī 'Abd al-Bāqi Efendi	ZS, 761
37	Es'adzāde makhdūm-i Mihteri Mes'ūd Çelebi	ZS, 786
38	Zeyrekzāde Efendi Hāfızı Mustafā Efendi Makhdūmları [Mehmed Sa'di] {Sa'di}	ZS, 803
39	Abū Sa'īdzāde Feyḍ Allah Efendi makhdūmu [Meḥmed] {Reshīd}	ZS, 921